

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/30/2018

Reviewed on 10/30/2018

1 Identification

- **Product identifier**
- **Trade name:** PARAFORMALDEHYDE 32% SOLUTION, EM GRADE
- **Article number:** 15714, 15714-S, 15714-1L, 15714-SP
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 Electron Microscopy Sciences
 1560 Industry Road
 USA-Hatfield, PA 19440
 Tel: 215-412-8400 Fax: 215-412-8450
 email: sgkcck@aol.com
 www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
 ChemTrec 1-800-424-9300 Contract CCN7661
 1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Flam. Liq. 4 H227 Combustible liquid.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**



· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

formaldehyde

· **Hazard statements**

Combustible liquid.

Harmful if swallowed.

Toxic in contact with skin or if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from flames and hot surfaces. – No smoking.

Do not breathe dusts or mists.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Call a poison center/doctor if you feel unwell.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a poison center/doctor.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Take off immediately all contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



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· **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	2	Fire = 2
REACTIVITY	0	Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

50-00-0	formaldehyde	>25- ≤50%
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4 First-aid measures

- **Description of first aid measures**
- **General information:**
 Immediately remove any clothing soiled by the product.
 Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
 Remove breathing apparatus only after contaminated clothing have been completely removed.
 In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
 Supply fresh air or oxygen; call for doctor.
 In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
 Immediately call a doctor.
 Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
 No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

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6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· PAC-1:		
50-00-0	formaldehyde	0.90 ppm
· PAC-2:		
50-00-0	formaldehyde	14 ppm
· PAC-3:		
50-00-0	formaldehyde	56 ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· Components with limit values that require monitoring at the workplace:	
50-00-0 formaldehyde	
PEL	Short-term value: 2 ppm Long-term value: 0.75 ppm see 29 CFR 1910.1048(c)

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REL	Long-term value: 0.016 ppm Ceiling limit value: 0.1* ppm *15-min; See Pocket Guide App. A
TLV	Short-term value: 0.37 mg/m ³ , 0.3 ppm Long-term value: 0.12 mg/m ³ , 0.1 ppm DSEN; RSEN

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid

Color: Clear

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

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· pH-value at 20 °C (68 °F):	2.8
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	>93 °C (>199.4 °F)
· Flash point:	>60 °C (>140 °F)
· Flammability (solid, gaseous):	Not flammable.
· Ignition temperature:	300 °C (572 °F)
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Not determined.
· Explosion limits:	
Lower:	7 Vol %
Upper:	73 Vol %
· Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)
· Density at 20 °C (68 °F):	0.9392 g/cm ³ (7.83762 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	32.0 %
Water:	68.0 %
VOC content:	32.00 %
	831.7 g/l / 6.94 lb/gal
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

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11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

50-00-0 formaldehyde		
Oral	LD50	>200 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** Strong caustic effect on skin and mucous membranes.

- **on the eye:**

Strong caustic effect.

Strong irritant with the danger of severe eye injury.

- **Sensitization:** Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Carcinogenic.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

50-00-0	formaldehyde	I
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- **NTP (National Toxicology Program)**

50-00-0	formaldehyde	K
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- **OSHA-Ca (Occupational Safety Health Administration)**

50-00-0	formaldehyde	
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12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even small quantities leak into the ground.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

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· **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|---|
| <ul style="list-style-type: none"> · UN-Number · DOT, ADR, IMDG, IATA | <p style="margin-left: 20px;">UN2209</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT · ADR · IMDG, IATA | <p style="margin-left: 20px;">Formaldehyde solutions
2209 FORMALDEHYDE SOLUTION
FORMALDEHYDE SOLUTION</p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT | <p style="margin-left: 20px;">8 Corrosive substances</p> |
| <div style="display: flex; align-items: center;">  <ul style="list-style-type: none"> · Class · Label </div> | <p style="margin-left: 20px;">8</p> |
| <ul style="list-style-type: none"> · ADR, IMDG, IATA | <p style="margin-left: 20px;">8 Corrosive substances</p> |
| <div style="display: flex; align-items: center;">  <ul style="list-style-type: none"> · Class · Label </div> | <p style="margin-left: 20px;">8</p> |
| <ul style="list-style-type: none"> · Packing group · DOT, ADR, IMDG, IATA | <p style="margin-left: 20px;">III</p> |
| <ul style="list-style-type: none"> · Environmental hazards: | <p style="margin-left: 20px;">Not applicable.</p> |
| <ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category | <p style="margin-left: 20px;">Warning: Corrosive substances
80
F-A,S-B
A</p> |
| <ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | <p style="margin-left: 20px;">Not applicable.</p> |

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· Transport/Additional information:

· DOT

· Quantity limitations

On passenger aircraft/rail: 5 L

On cargo aircraft only: 60

· ADR

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· IMDG

· Limited quantities (LQ)

5L

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation":

UN 2209 FORMALDEHYDE SOLUTION, 8, III

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture

· Sara

· Section 355 (extremely hazardous substances):

50-00-0 formaldehyde

· Section 313 (Specific toxic chemical listings):

50-00-0 formaldehyde

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

50-00-0 formaldehyde

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

50-00-0 formaldehyde

B1

· TLV (Threshold Limit Value established by ACGIH)

50-00-0 formaldehyde

A2

· NIOSH-Ca (National Institute for Occupational Safety and Health)

50-00-0 formaldehyde

· GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**



GHS05 GHS06 GHS07 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

formaldehyde

· **Hazard statements**

Combustible liquid.

Harmful if swallowed.

Toxic in contact with skin or if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from flames and hot surfaces. – No smoking.

Do not breathe dusts or mists.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Call a poison center/doctor if you feel unwell.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a poison center/doctor.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Take off immediately all contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.

Exceptions can be made by the authorities in certain cases.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 10/30/2018 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety **Health**

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flam. Liq. 4: Flammable liquids – Category 4

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 3: Acute toxicity – Category 3

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 2: Germ cell mutagenicity – Category 2

Carc. 1B: Carcinogenicity – Category 1B

Safety Data Sheet

according to WHS Regulations

Printing date 30.10.2018

Revision: 30.10.2018

1 Identification

- **Product identifier**
- **Trade name:** PARAFORMALDEHYDE 32% SOLUTION, EM GRADE
- **Article number:** 15714, 15714-S, 15714-1L, 15714-SP
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- ProSciTech Pty Ltd
11 Carlton Street, Kirwan QLD 4817 Australia
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Website: ems.proscitech.com
- Emgrid Australia Pty. Ltd.
P.O. Box 118
The Patch VIC 3792
Australia
Tel: 03 9752 1785
Fax: 03 9752 1784
Website: www.emgrid.com.au
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) Identification

- **Classification of the substance or mixture**



GHS06 skull and crossbones

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 health hazard

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

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GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Flam. Liq. 4 H227 Combustible liquid.

· **Label elements**

· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS05

GHS06

GHS07

GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
formaldehyde

· **Hazard statements**

Combustible liquid.

Harmful if swallowed.

Toxic in contact with skin.

Toxic if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from flames and hot surfaces. – No smoking.

Do not breathe dusts or mists.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a POISON CENTER/doctor.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Take off immediately all contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

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Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition and Information on Ingredients

- **Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

50-00-0	formaldehyde	>25-≤50%
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- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Remove breathing equipment only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Call for a doctor immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.

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- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and Storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

50-00-0 formaldehyde

NES	Short-term value: 2.5 mg/m ³ , 2 ppm Long-term value: 1.2 mg/m ³ , 1 ppm Sen
WES	Short-term value: 2.5 mg/m ³ , 2 ppm Long-term value: 1.2 mg/m ³ , 1 ppm Sen

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

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· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Liquid
Colour:	Clear
Odour:	Characteristic
Odour threshold:	Not determined.

· **pH-value at 20 °C:** 2.8

· **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	>93 °C

· **Flash point:** >60 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 300 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Not determined.

· **Explosion limits:**

Lower:	7 Vol %
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Upper:	73 Vol %
· Vapour pressure at 20 °C:	23 hPa
· Density at 20 °C:	0.9392 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	32.0 %
Water:	68.0 %
VOC (EC)	32.00 %
· Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity**

· **LD/LC50 values relevant for classification:**

50-00-0 formaldehyde

Oral	LD50	>200 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation** Strong caustic effect on skin and mucous membranes.
- **Serious eye damage/irritation**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitisation** Sensitisation possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Toxic
Harmful

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Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Carcinogenic.

· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**

Muta. 2, Carc. 1B

12 Ecological Information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behaviour in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· **UN-Number**

· **ADG, IMDG, IATA**

UN2209

· **UN proper shipping name**

· **ADG**

· **IMDG, IATA**

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FORMALDEHYDE SOLUTION

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-AU-

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Trade name: **PARAFORMALDEHYDE 32% SOLUTION, EM GRADE**

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· **Transport hazard class(es)**· **ADG, IMDG, IATA**· **Class**

8 Corrosive substances.

· **Label**

8

· **Packing group**· **ADG, IMDG, IATA**

III

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Warning: Corrosive substances.

· **Danger code (Kemler):**

80

· **EMS Number:**

F-A,S-B

· **Stowage Category**

A

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**· **ADG**· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **Transport category**

3

· **Tunnel restriction code**

E

· **IMDG**· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":**

UN 2209 FORMALDEHYDE SOLUTION, 8, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**· **Australian Inventory of Chemical Substances**

All ingredients are listed.

· **Standard for the Uniform Scheduling of Medicines and Poisons**

50-00-0 formaldehyde

S2, S6, S10

· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

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Trade name: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

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· **Hazard pictograms**



GHS05 GHS06 GHS07 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

formaldehyde

· **Hazard statements**

Combustible liquid.

Harmful if swallowed.

Toxic in contact with skin.

Toxic if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from flames and hot surfaces. – No smoking.

Do not breathe dusts or mists.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a POISON CENTER/doctor.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Take off immediately all contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** *None of the ingredients is listed.*

· **Seveso category H2 ACUTE TOXIC**

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** *50 t*

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** *200 t*

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Trade name: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

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· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 4: Flammable liquids – Category 4

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 3: Acute toxicity – Category 3

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 2: Germ cell mutagenicity – Category 2

Carc. 1B: Carcinogenicity – Category 1B

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/30/2018

Reviewed on 10/30/2018

1 Identification

- **Product identifier**
- **Trade name:** PARAFORMALDEHYDE 32% SOLUTION, EM GRADE
- **Article number:** 15714, 15714-S, 15714-1L, 15714-SP
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 Electron Microscopy Sciences
 1560 Industry Road
 USA-Hatfield, PA 19440
 Tel: 215-412-8400 Fax: 215-412-8450
 email: sgkcck@aol.com
 www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
 ChemTrec 1-800-424-9300 Contract CCN7661
 1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Toxicity (Dermal) – Category 3 H311 Toxic in contact with skin.

Acute Toxicity (Inhalation) - Category 3 H331 Toxic if inhaled.



GHS08 Health hazard

Germ Cell Mutagenicity - Category 2 H341 Suspected of causing genetic defects.

Carcinogenicity - Category 1B H350 May cause cancer.



GHS05 Corrosion

Skin Corrosion - Category 1B H314 Causes severe skin burns and eye damage.

Serious Eye Damage - Category 1 H318 Causes serious eye damage.



GHS07

Acute Toxicity (Oral) - Category 4 H302 Harmful if swallowed.

Skin Sensitizer - Category 1 H317 May cause an allergic skin reaction.

Flammable Liquids - Category 4 H227 Combustible liquid.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

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Trade name: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(Contd. of page 1)

· **Hazard pictograms**



· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

formaldehyde

· **Hazard statements**

Combustible liquid.

Harmful if swallowed.

Toxic in contact with skin or if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Call a poison center/doctor if you feel unwell.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a poison center/doctor.

IF exposed or concerned: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Specific measures (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 2

Reactivity = 0

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· **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	2	Fire = 2
REACTIVITY	0	Reactivity = 0

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

50-00-0	formaldehyde	15-40% w/w *
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* Actual concentration ranges are withheld as a trade secret.

4 First-aid measures

- **Description of first aid measures**
- **General information:**
 Immediately remove any clothing soiled by the product.
 Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
 Remove breathing apparatus only after contaminated clothing have been completely removed.
 In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
 Supply fresh air or oxygen; call for doctor.
 In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
 Immediately call a doctor.
 Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
 · **Most important symptoms and effects, both acute and delayed** No further relevant information available.
 · **Indication of any immediate medical attention and special treatment needed**
 No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 Wear protective equipment. Keep unprotected persons away.

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Trade name: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(Contd. of page 3)

- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

50-00-0 formaldehyde

EL	Long-term value: 0.3 ppm Ceiling limit value: 1 ppm ACGIH A1; IARC 1; S(D), S(R)
EV Ceiling limit value	Short-term value: 1.0 ppm 1.5 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 10/30/2018

Trade name: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(Contd. of page 4)

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Liquid
Color:	Clear
· Odor:	Characteristic
· Odor threshold:	Not determined.

· **pH-value at 20 °C:** 2.8

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	>93 °C

· **Flash point:** >60 °C

· **Flammability (solid, gaseous):** Not flammable.

· **Ignition temperature:** 300 °C

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Not determined.

· **Explosion limits:**

Lower:	7 Vol %
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Trade name: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(Contd. of page 5)

Upper:	73 Vol %
· Vapor pressure at 20 °C:	23 hPa
· Density at 20 °C:	0.9392 g/cm ³
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	32.0 %
Water:	68.0 %
· Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

50-00-0 formaldehyde

Oral	LD50	>200 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic
Harmful
Corrosive

(Contd. on page 7)

CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/30/2018

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Trade name: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(Contd. of page 6)

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Carcinogenic.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

50-00-0	formaldehyde	I
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· **NTP (National Toxicology Program)**

50-00-0	formaldehyde	K
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12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**

· **DOT, TDG, IMDG, IATA**

UN2209

· **UN proper shipping name**

· **DOT**

Formaldehyde solutions

· **TDG**

2209 FORMALDEHYDE SOLUTION

· **IMDG, IATA**

FORMALDEHYDE SOLUTION

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Trade name: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

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· **Transport hazard class(es)**

· **DOT**



· **Class** 8 Corrosive substances
 · **Label** 8
 · **TDG, IMDG, IATA**



· **Class** 8 Corrosive substances
 · **Label** 8

· **Packing group**

· **DOT, TDG, IMDG, IATA** III

· **Environmental hazards:** Not applicable.

· **Special precautions for user** Warning: Corrosive substances

· **Danger code (Kemler):** 80

· **EMS Number:** F-A,S-B

· **Stowage Category** A

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations** On passenger aircraft/rail: 5 L
 On cargo aircraft only: 60

· **TDG**

· **Excepted quantities (EQ)** Code: E1
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 1000 ml

· **IMDG**

· **Limited quantities (LQ)** 5L
 · **Excepted quantities (EQ)** Code: E1
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":** UN 2209 FORMALDEHYDE SOLUTION, 8, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

50-00-0 formaldehyde

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CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/30/2018

Reviewed on 10/30/2018

Trade name: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

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· **Section 313 (Specific toxic chemical listings):**

50-00-0 formaldehyde

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

50-00-0 formaldehyde

· **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05 GHS06 GHS07 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

formaldehyde

· **Hazard statements**

Combustible liquid.

Harmful if swallowed.

Toxic in contact with skin or if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Call a poison center/doctor if you feel unwell.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a poison center/doctor.

IF exposed or concerned: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Specific measures (see on this label).

If skin irritation or rash occurs: Get medical advice/attention.

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Trade name: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

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Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of the latest revision of the safety data sheet 10/30/2018 / -**

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.10.2018

Revision: 30.10.2018

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** PARAFORMALDEHYDE 32% SOLUTION, EM GRADE
- **Article number:** 15714, 15714-S, 15714-1L, 15714-SP
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazards identification

- **Classification of the substance or mixture**



skull and crossbones

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



health hazard

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.



corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



Acute Tox. 4 H302 Harmful if swallowed.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Flam. Liq. 4 H227 Combustible liquid.

- **Label elements**

- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

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(Contd. of page 1)

· **Hazard pictograms**



GHS05 GHS06 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

formaldehyde

· **Hazard statements**

Combustible liquid.

Harmful if swallowed.

Toxic in contact with skin or if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

· **Precautionary statements**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

Take off immediately all contaminated clothing and wash it before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

50-00-0	formaldehyde	>25-≤50%
	Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Skin Corr. 1B, H314; Skin Sens. 1, H317	

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

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(Contd. of page 2)

- **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Call for a doctor immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.

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- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

50-00-0 formaldehyde

TLV	Long-term value: 0.2 ppm Ceiling limit: 0.3 ppm
-----	--

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work.
 Store protective clothing separately.
 Avoid contact with the eyes.
 Avoid contact with the eyes and skin.
- **Respiratory protection:**
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
 The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
 The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

IL

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Liquid
· Colour:	Clear
· Odour:	Characteristic
· Odour threshold:	Not determined.

· **pH-value at 20 °C:** 2.8

· **Change in condition**

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	>93 °C

· **Flash point:** >60 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 300 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Not determined.

· **Explosion limits:**

· Lower:	7 Vol %
· Upper:	73 Vol %

· **Vapour pressure at 20 °C:** 23 hPa

· **Density at 20 °C:** 0.9392 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with water:**

Fully miscible.

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· **Solvent content:**

· Organic solvents:	32.0 %
· Water:	68.0 %
· VOC (EC)	32.00 %

· **Solids content:** 0.0 %

· **Other information** No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**

- **LD/LC50 values relevant for classification:**

50-00-0 formaldehyde

Oral	LD50	>200 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation** Strong caustic effect on skin and mucous membranes.
- **Serious eye damage/irritation**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitisation** Sensitisation possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Toxic

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Carcinogenic.

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Muta. 2, Carc. 1B

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· UN-Number · ADR, IMDG, IATA	UN2209
· UN proper shipping name · ADR · IMDG, IATA	2209 FORMALDEHYDE SOLUTION FORMALDEHYDE SOLUTION
· Transport hazard class(es) · ADR, IMDG, IATA	
	
· Class · Label	8 Corrosive substances. 8
· Packing group · ADR, IMDG, IATA	III
· Environmental hazards:	Not applicable.
· Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category	Warning: Corrosive substances. 80 F-A,S-B A
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category · Tunnel restriction code	3 E
· IMDG · Limited quantities (LQ)	5L

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· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":**

UN 2209 FORMALDEHYDE SOLUTION, 8, III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS05

GHS06

GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
formaldehyde
- **Hazard statements**
Combustible liquid.
Harmful if swallowed.
Toxic in contact with skin or if inhaled.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Suspected of causing genetic defects.
May cause cancer.
- **Precautionary statements**
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.
Specific treatment (see on this label).
Take off immediately all contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** *None of the ingredients is listed.*
- **Seveso category** H2 ACUTE TOXIC
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **National regulations:**
- **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.
- **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

IL

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H331 Toxic if inhaled.
- H341 Suspected of causing genetic defects.
- H350 May cause cancer.

· **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 4: Flammable liquids – Category 4
- Acute Tox. 3: Acute toxicity – Category 3
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Corr. 1B: Skin corrosion/irritation – Category 1B
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Skin Sens. 1: Skin sensitisation – Category 1
- Muta. 2: Germ cell mutagenicity – Category 2
- Carc. 1B: Carcinogenicity – Category 1B

HL

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.10.2018

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** PARAFORMALDEHYDE 32% SOLUTION, EM GRADE
- **Article number:** 15714, 15714-S, 15714-1L, 15714-SP
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 health hazard

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

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Trade name: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

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· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS05 GHS06 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

formaldehyde

· **Hazard statements**

- H302 Harmful if swallowed.
 H311+H331 Toxic in contact with skin or if inhaled.
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H341 Suspected of causing genetic defects.
 H350 May cause cancer.
 H335 May cause respiratory irritation.

· **Precautionary statements**

- P303+P361+P353 **IF ON SKIN (or hair):** Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor.
 P321 Specific treatment (see on this label).
 P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
 · **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 50-00-0	formaldehyde	>25-≤50%
EINECS: 200-001-8	☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ Muta. 2, H341; Carc. 1B, H350; ☠ Skin Corr. 1B, H314; ☠ Skin Sens. 1, H317	

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

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Trade name: **PARAFORMALDEHYDE 32% SOLUTION, EM GRADE**

(Contd. of page 2)

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

· **5.3 Advice for firefighters**

· **Protective equipment:** Mouth respiratory protective device.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

· **6.2 Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

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- Open and handle receptacle with care.
- Prevent formation of aerosols.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

50-00-0 formaldehyde

WEL	Short-term value: 2.5 mg/m ³ , 2 ppm
	Long-term value: 2.5 mg/m ³ , 2 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
 - Store protective clothing separately.
 - Avoid contact with the eyes.
 - Avoid contact with the eyes and skin.
- **Respiratory protection:**
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **Eye protection:**

Tightly sealed goggles

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· Form:	Liquid
· Colour:	Clear
· Odour:	Characteristic
· Odour threshold:	Not determined.

· **pH-value at 20 °C:** 2.8· **Change in condition**

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	>93 °C

· **Flash point:** >60 °C· **Flammability (solid, gas):** Not applicable.· **Ignition temperature:** 300 °C· **Decomposition temperature:** Not determined.· **Auto-ignition temperature:** Product is not selfigniting.· **Explosive properties:** Not determined.· **Explosion limits:**

· Lower:	7 Vol %
· Upper:	73 Vol %

· **Vapour pressure at 20 °C:** 23 hPa· **Density at 20 °C:** 0.9392 g/cm³· **Relative density:** Not determined.· **Vapour density:** Not determined.· **Evaporation rate:** Not determined.· **Solubility in / Miscibility with water:**

Fully miscible.

· **Partition coefficient: n-octanol/water:** Not determined.· **Viscosity:**

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· **Solvent content:**

· Organic solvents:	32.0 %
· Water:	68.0 %
· VOC (EC)	32.00 %

· **Solids content:** 0.0 %

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· 9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
 - **Acute toxicity**
Harmful if swallowed.
Toxic in contact with skin or if inhaled.
- | | | |
|--|------|------------------|
| · LD/LC50 values relevant for classification: | | |
| 50-00-0 formaldehyde | | |
| Oral | LD50 | >200 mg/kg (rat) |
- **Primary irritant effect:**
 - **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
 - **Serious eye damage/irritation**
Causes serious eye damage.
 - **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
 - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - **Germ cell mutagenicity**
Suspected of causing genetic defects.
 - **Carcinogenicity**
May cause cancer.
 - **Reproductive toxicity** Based on available data, the classification criteria are not met.
 - **STOT-single exposure**
May cause respiratory irritation.
 - **STOT-repeated exposure** Based on available data, the classification criteria are not met.
 - **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

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Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into the ground.

12.5 Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:

- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN-Number

· **ADR, IMDG, IATA** UN2209

14.2 UN proper shipping name

· **ADR** 2209 FORMALDEHYDE SOLUTION
· **IMDG, IATA** FORMALDEHYDE SOLUTION

14.3 Transport hazard class(es)

· **ADR, IMDG, IATA**



· **Class** 8 Corrosive substances.
· **Label** 8

14.4 Packing group

· **ADR, IMDG, IATA** III

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Warning: Corrosive substances.

· **Danger code (Kemler):**

80

· **EMS Number:**

F-A,S-B

· **Stowage Category**

A

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

Transport/Additional information:

· **ADR**

· **Limited quantities (LQ)** 5L

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· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	E
<hr/>	
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 2209 FORMALDEHYDE SOLUTION, 8, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category H2 ACUTE TOXIC**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 28
- **National regulations:**
- **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H331 Toxic if inhaled.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 2: Germ cell mutagenicity – Category 2
Carc. 1B: Carcinogenicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

GB

化学品安全技术说明书

根据 GB/T 16483-2008, GB/T 17519-2013

打印日期 2018.10.30

在 2018.10.30 审核

1 化学品及企业标识

- **产品识别者**
- **化学品中文(英文)名称, 化学品俗名或商品名:** **PARAFORMALDEHYDE 32% SOLUTION, EM GRADE**
- **商品编号:** 15714, 15714-S, 15714-1L, 15714-SP
- **相应纯物质或者混合物的相关下位用途及禁止用途** 无相关详细资料。
- **原材料的应用/准备工作进行** 实验室化学物
- **安全技术说明书内供应商详细信息**
- **企业名称:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **可获取更多资料的部门:** Product safety department
- **紧急联系电话号码:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 危险性概述

· 紧急情况概述:

纯净的, 液体, 可燃液体。 吞咽有害。 皮肤接触或吸入可致中毒。 造成严重皮肤灼伤和眼损伤。 可能导致皮肤过敏反应。 怀疑会导致遗传性缺陷。 可能致癌。

· GHS危险性类别



骷髅和交叉骨

急性毒性(经皮肤) 第3类 H311 皮肤接触会中毒
急性毒性(吸入) 第3类 H331 吸入会中毒



健康危害

生殖细胞致突变性 第2类 H341 怀疑会导致遗传性缺陷
致癌性 第1B类 H350 可能致癌



腐蚀

皮肤腐蚀/刺激 第1B类 H314 造成严重皮肤灼伤和眼损伤
严重眼睛损伤/眼睛刺激性 第1类 H318 造成严重眼损伤



急性毒性(经口) 第4类 H302 吞咽有害
敏化(皮肤) 第1类 H317 可能导致皮肤过敏反应
易燃液体 第4类 H227 可燃液体

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· 标签因素

· GHS卷标元素 本产品根据化学物质分类及标记全球协调制度(GHS)进行了分类及标记。

· 图示



GHS05 GHS06 GHS08

· 名称 危险

· 标签上辨别危险的成份:

福尔马林溶液

· 危险字句

可燃液体

吞咽有害

皮肤接触或吸入可致中毒

造成严重皮肤灼伤和眼损伤

可能导致皮肤过敏反应

怀疑会导致遗传性缺陷

可能致癌

· 警戒字句

· 事故响应

如皮肤(或头发)沾染:立即脱掉所有沾染的衣服。用水清洗皮肤/淋浴

如进入眼睛:用水小心冲洗几分钟。如戴隐形眼镜并可方便地取出,取出隐形眼镜。继续冲洗

立即呼叫急救中心/医生

具体治疗(见本标签上的)

立即脱掉所有沾染的衣服,清洗后方可重新使用

· 安全储存

存放处须加锁

· 废弃处置

处置内装物/容器按照地方/区域/国家/国际规章

· 其他有害性

· PBT(残留性、生物浓缩性、毒性物质) 及 vPvB(高残留性、高生物浓缩性物质)评价结果

· PBT(残留性、生物浓缩性、毒性物质) 不适用的

· vPvB(高残留性、高生物浓缩性物质): 不适用的

3 成分/组成信息

· 混合物

· 描述: 由以下含有无害添加剂的成分组成的混合物

· 危险的成分:

50-00-0	福尔马林溶液 ⚠ 急性毒性(经口) 第3类, H301; 急性毒性(经皮肤) 第3类, H311; 急性毒性(吸入) 第3类, H331; ⚠ 生殖细胞致突变性 第2类, H341; 致癌性 第1B类, H350; ⚠ 皮肤腐蚀/刺激 第1B类, H314; ⚠ 敏化(皮肤) 第1类, H317	>25-≤50%
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4 急救措施

· 应急措施要领

· 总说明:

马上脱下染有该产品的衣服。

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中毒的症状可能会在几个小时以后才出现;因此在发生事故之后起码要有 48 小时的医疗观察。

只在彻底地脱去了已被污染的衣服之后才能移走呼吸仪器。

万一出现了不规则的呼吸或呼吸的阻碍,请为病人提供人工呼吸。

·吸入:

供给新鲜空气或氧气;叫医生。

万一病人不清醒时,请让病人侧躺以便移动。

·皮肤接触: 马上用水和肥皂进行彻底的冲洗。

·眼睛接触: 张开眼睛在流水下冲洗数分钟。然后咨询医生。

·食入:

马上召唤医生。

喝大量的清水和提供新鲜的空气。马上召唤医生。

·给医生的资料:

·最重要的急慢性症状及其影响 无相关详细资料。

·需要及时的医疗处理及特别处理的症状 无相关详细资料。

5 消防措施

·灭火方法

·灭火的方法和灭火剂: 二氧化碳 (CO₂)、灭火粉末或洒水。使用洒水或抗酒精泡沫灭火剂扑灭较大的火种。

·特别危险性 无相关详细资料。

·特殊灭火方法

·消防人员特殊的防护装备: 口腔呼吸保护装置。

6 泄漏应急处理

·保护措施 带上保护仪器。让未受到保护的人们远离。

·环境保护措施:

用大量的水进行稀释。

切勿让其进入下水道/水面或地下水。

·密封及净化方法和材料:

吸收液体粘合原料 (沙粒、硅藻土、酸性粘合剂、通用粘合剂、锯屑)。

使用中和剂。

根据第 13 条条款弃置受污染物。

确保有足够的通风装置。

·参照其他部分

有关安全处理的资料请参阅第 7 节。

有关个人防护装备的资料请参阅第 8 节。

有关弃置的资料请参阅第 13 节。

7 操作处置与储存

·操作处置

·储存

确保工作间有良好的通风/排气装置。

小心打开及处理贮藏器。

防止气溶胶的形成。

·有关火灾及防止爆炸的资料: 提供呼吸保护装置。

·混合危险性等安全储存条件

·储存:

·储存库和容器须要达到的要求: 没有特别的要求。

·有关使用一个普通的储存设施来储存的资料: 不需要。

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- 有关储存条件的更多资料: 将容器密封.
- 具体的最终用户 无相关详细资料.

8 接触控制和个体防护

- 工程控制方法: 没有进一步数据;见第 7 项.
- 控制变数

· 在工作场需要监控的限值成分

50-00-0 福尔马林溶液

OEL (CN)	最高容许浓度: 0.5 mg/m ³
PEL (TW)	PC-TWA: 1.2 mg/m ³ , 1 ppm

- 额外的资料: 制作期间有效的清单将作为基础来使用.

· 泄漏控制

· 个人防护设备:

· 一般保护和卫生措施:

- 远离食品、饮料和饲料.
- 立即除去所有的不洁的和被污染的衣服.
- 在休息之前和工作完毕后请清洗双手.
- 分开储存保护性衣服.
- 避免和眼睛接触.
- 避免和眼睛及皮肤接触.

· 呼吸系统防护:

如果曾短暂接触或在低污染的情况下,请使用呼吸过滤装置. 如果曾深入或较长时间接触,请使用独立的呼吸保护装置.

· 手防护:



保护手套

手套的物料必须是不渗透性的,且能抵抗该产品/物质/添加剂.
基于缺乏测试,对于产品/制剂/化学混合物,并不会提供手套材料的建议
选择手套材料时,请注意材料的渗透时间,渗透率和降解参数

· 手套材料

选择合适的手套不单取决于材料,亦取决于质量特征,以及来自哪一间生产厂家,因为该产品是由很多材料配制而成,手套材料的抵抗力并不可预计,所以,必须在使用之前进行检查

- 渗入手套材料的时间 请向劳保手套生产厂家获取准确的破裂时间并观察实际的破裂时间

· 眼睛防护:



密封的护目镜

9 理化特性

· 有关基本物理及化学特性的信息

· 一般说明

· 外观:

形状: 液体

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· 颜色:	纯净的
· 气味:	有特性的
· 嗅觉阈限	未决定.
· pH值 在 20 °C:	2.8
· 条件的更改	
· 熔点:	未确定的
· 沸点/初沸点和沸程:	>93 °C
· 闪点:	>60 °C
· 可燃性 (固体、气体):	不适用的
· 点火温度:	300 °C
· 分解温度:	未决定.
· 自燃温度:	该产品是不自燃的
· 爆炸的危险性:	未决定.
· 爆炸极限:	
· 较低:	7 Vol %
· 较高:	73 Vol %
· 蒸气压 在 20 °C:	23 hPa
· 密度 在 20 °C:	0.9392 g/cm ³
· 相对密度	未决定.
· 蒸气密度	未决定.
· 蒸发速率	未决定.
· 溶解性	
· 水:	完全可拌和的
· n-辛醇/水分配系数:	未决定.
· 黏性:	
· 动态:	未决定.
· 运动学的:	未决定.
· 溶剂成份:	
· 有机溶剂:	32.0 %
· 水:	68.0 %
· 固体成份:	0.0 %
· 其他信息	无相关详细资料。

10 稳定性和反应性

- 反应性 无相关详细资料。
- 稳定性
- 热分解/要避免的情况: 如果遵照规格使用则不会分解.
- 有害反应可能性 未有已知的危险反应.
- 应避免的条件 无相关详细资料。
- 不相容的物质: 无相关详细资料。
- 危险的分解产物: 未知有危险的分解产品.

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11 毒理学信息

· 对毒性学影响的信息

· 急性毒性:

· 与分类相关的 LD/LC50 值:

50-00-0 福尔马林溶液	
口腔	LD50 >200 mg/kg (rat)

· 主要的刺激性影响:

· **皮肤:** 在皮肤和粘膜上造成强烈的腐蚀性影响.

· 在眼睛上面:

强烈的腐蚀性影响.

强烈的刺激性和造成严重伤害眼睛的危险.

· **致敏作用:** 通过皮肤接触可能造成敏化作用.

· 更多毒物的资料:

根据有关配制的一般欧盟分类指南的计算方法(刊印在最新版本),该产品显示以下的危险:

毒性的

有害的

腐蚀性的

刺激性的

吞咽该产品除了导致口部和喉咙出现强烈的腐蚀性现象之外,还有对食道和胃部造成穿孔的危险.

致癌的.

· 对以下组别可能产生影响的数据:

· **CMR作用(致癌、导致基因突变、对生殖系统有害)**

生殖细胞致突变性 第2类, 致癌性 第1B类

12 生态学信息

· 生态毒性

· **水生毒性:** 无相关详细资料。

· **持久性和降解性** 无相关详细资料。

· 环境系统习性:

· **潜在的生物累积性** 无相关详细资料。

· **土壤内移动性** 无相关详细资料。

· 额外的生态学资料:

· 总括注解:

水危害级别 2 (德国规例) (通过名单进行自我评估): 对水是危险的

不要让该产品接触地下水、水道或污水系统.

不要让未被稀释或未被中和的产品接触下水道或排水沟渠.

即使是小量的产品渗入地下也会对饮用水造成危险.

· **PBT(残留性、生物浓缩性、毒性物质) 及 vPvB(高残留性、高生物浓缩性物质)评价结果**

· **PBT(残留性、生物浓缩性、毒性物质)** 不适用的

· **vPvB(高残留性、高生物浓缩性物质):** 不适用的

· **其他副作用** 无相关详细资料。

13 废弃处置

· 废弃处置方法

· **建议:** 不能将该产品和家居垃圾一起丢弃. 不要让该产品接触污水系统.

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- 受污染的容器和包装:
- 建议: 必须根据官方的规章来丢弃.
- 建议的清洗剂: 如有必要请使用水及清洁剂进行清洁.

14 运输信息

· 联合国危险货物编号(UN号)	UN2209
· ADR, IMDG, IATA	
· UN适当装船名	2209 甲醛溶液
· ADR	FORMALDEHYDE SOLUTION
· IMDG, IATA	
· 运输危险等级	
· ADR, IMDG, IATA	
· 级别	8 腐蚀性物质
· 标签	8
· 包装组别	III
· ADR, IMDG, IATA	
· 危害环境:	不适用的
· 用户特别预防措施	警告: 腐蚀性物质
· 危险编码:	80
· EMS 号码:	F-A,S-B
· Stowage Category	A
· MARPOL73/78(针对船舶引起的海洋污染预防协议)附件书2及根据IBC Code(国际装船货物编码)的大量运送	不适用的
· 运输/额外的资料:	
· ADR	
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "标准规定":	UN 2209 甲醛溶液, 8, III

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15 法规信息

- 对相应纯物质或者混合物的安全、保健及环境法规/法律
- 危险化学品安全管理条例

- 危险化学品目录

50-00-0 福尔马林溶液

- 新化学物质环境管理办法

- 中国现有化学物质名录

列出所有成分

- GHS卷标元素 本产品根据化学物质分类及标记全球协调制度(GHS)进行了分类及标记。

- 图示



GHS05 GHS06 GHS08

- 名称 危险

- 标签上辨别危险的成份:

福尔马林溶液

- 危险字句

可燃液体

吞咽有害

皮肤接触或吸入可致中毒

造成严重皮肤灼伤和眼损伤

可能导致皮肤过敏反应

怀疑会导致遗传性缺陷

可能致癌

- 警戒字句

- 事故响应

如皮肤(或头发)沾染:立即脱掉所有沾染的衣服。用水清洗皮肤/淋浴

如进入眼睛:用水小心冲洗几分钟。如戴隐形眼镜并可方便地取出,取出隐形眼镜。继续冲洗

立即呼叫急救中心/医生

具体治疗(见本标签上的)

立即脱掉所有沾染的衣服,清洗后方可重新使用

- 安全储存

存放处须加锁

- 废弃处置

处置内装物/容器按照地方/区域/国家/国际规章

- 国家的规章:

- 有关使用限制的资料: 禁止员工接触在配制中含有致癌的物料. 在某些情况中由当局作出例外的决定.

- 化学物质安全性评价: 尚未进行化学物质安全性评价

16 其他信息

该资料是基于我们目前的知识. 然而,这并不构成对任何特定产品特性的担保并且不建立一个法律上有效的合同关系.

- 缩写:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

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IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: 持久性生物累积性有毒物质
vPvB: very Persistent and very Bioaccumulative
易燃液体 第4类: Flammable liquids – Category 4
急性毒性(经口) 第3类: Acute toxicity – Category 3
急性毒性(经口) 第4类: Acute toxicity – Category 4
皮肤腐蚀/刺激 第1B类: Skin corrosion/irritation – Category 1B
严重眼睛损伤/眼睛刺激性 第1类: Serious eye damage/eye irritation – Category 1
敏化(皮肤) 第1类: Skin sensitisation – Category 1
生殖细胞致突变性 第2类: Germ cell mutagenicity – Category 2
致癌性 第1B类: Carcinogenicity – Category 1B

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ODDÍL 1: Identifikace látky/směsi a společnosti/podniku

- **1.1 Identifikátor výrobku**
- **Obchodní označení:** PARAFORMALDEHYDE 32% SOLUTION, EM GRADE
- **Číslo výrobku:** 15714, 15714-S, 15714-1L, 15714-SP
- **1.2 Příslušná určená použití látky nebo směsi a nedoporučená použití**
Další relevantní informace nejsou k dispozici.
- **Použití látky / přípravku** Laboratorní chemikálie
- **1.3 Podrobné údaje o dodavateli bezpečnostního listu**
- **Identifikace výrobce/dovozce:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Obor poskytující informace:** Product safety department
- **1.4 Telefonní číslo pro naléhavé situace:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

ODDÍL 2: Identifikace nebezpečnosti

- **2.1 Klasifikace látky nebo směsi**
- **Klasifikace v souladu s nařízením (ES) č. 1272/2008**



GHS06 lebka se zkříženými hnáty

Acute Tox. 3 H311 Toxický při styku s kůží.

Acute Tox. 3 H331 Toxický při vdechování.



GHS08 nebezpečnost pro zdraví

Muta. 2 H341 Podezření na genetické poškození.

Carc. 1B H350 Může vyvolat rakovinu.



GHS05 korozivita

Skin Corr. 1B H314 Způsobuje těžké poleptání kůže a poškození očí.

Eye Dam. 1 H318 Způsobuje vážné poškození očí.



GHS07

Acute Tox. 4 H302 Zdraví škodlivý při požití.

Skin Sens. 1 H317 Může vyvolat alergickou kožní reakci.

STOT SE 3 H335 Může způsobit podráždění dýchacích cest.

- **2.2 Prvky označení**
- **Označování v souladu s nařízením (ES) č. 1272/2008** Produkt je klasifikován a označen podle nařízení CLP.

(pokračování na straně 2)

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(pokračování strany 1)

· Výstražné symboly nebezpečnosti


GHS05 GHS06 GHS08

· Signální slovo Nebezpečí
· Nebezpečné komponenty k etiketování:

Formaldehyd

· Standardní věty o nebezpečnosti

- H302 Zdraví škodlivý při požití.
 H311+H331 Toxický při styku s kůží a při vdechování.
 H314 Způsobuje těžké poleptání kůže a poškození očí.
 H317 Může vyvolat alergickou kožní reakci.
 H341 Podezření na genetické poškození.
 H350 Může vyvolat rakovinu.
 H335 Může způsobit podráždění dýchacích cest.

· Pokyny pro bezpečné zacházení

- P303+P361+P353 PŘI STYKU S KŮŽÍ (nebo s vlasy): Veškeré kontaminované části oděvu okamžitě svlékněte. Opláchněte kůži vodou/osprchujte.
 P305+P351+P338 PŘI ZASAŽENÍ OČÍ: Několik minut opatrně vyplachujte vodou. Vyjměte kontaktní čočky, jsou-li nasazeny a pokud je lze vyjmout snadno. Pokračujte ve vyplachování.
 P310 Okamžitě volejte TOXIKOLOGICKÉ INFORMAČNÍ STŘEDISKO/lékaře.
 P321 Odborné ošetření (viz na tomto štítku).
 P361+P364 Veškeré kontaminované části oděvu okamžitě svlékněte a před opětovným použitím vyperte.
 P405 Skladujte uzamčené.
 P501 Obsah/nádobu likvidujte v souladu s místními/regionálními/národními/mezinárodními předpisy.

· 2.3 Další nebezpečnost

- **Výsledky posouzení PBT a vPvB**
- **PBT:** Nedá se použít.
- **vPvB:** Nedá se použít.

ODDÍL 3: Složení/informace o složkách

- **3.2 Chemická charakteristika: Směsi**
- **Popis:** Směs obsahuje následné látky bez nebezpečných příměsí.

· Výrobek obsahuje tyto nebezpečné látky:

CAS: 50-00-0	Formaldehyd	>25- ≤50%
EINECS: 200-001-8	☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ Muta. 2, H341; Carc. 1B, H350; ☠ Skin Corr. 1B, H314; ⚠ Skin Sens. 1, H317	

- **Dodatečná upozornění:** Znění uvedených údajů o nebezpečnosti látky je uvedeno v kapitole 16.

ODDÍL 4: Pokyny pro první pomoc

- **4.1 Popis první pomoci**
- **Všeobecné pokyny:**
 Neprodleně odstranit části oděvu znečištěné produktem.
 Příznaky otravy se mohou projevit až po mnoha hodinách, proto je nutný lékařský dohled nejméně 48 hodin po nehodě.

(pokračování na straně 3)

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(pokračování strany 2)

- Ochranu dýchání odstranit teprve po odstranění znečištěných částí oděvu.
Při nepravidelném dechu nebo zástavě dechu provést umělé dýchání.
- **Při nadýchání:**
Přívod čerstvého vzduchu nebo kyslíku; vyhledat lékařskou pomoc.
Při bezvědomí uložit a přepravit ve stabilní poloze na boku.
 - **Při styku s kůží:** Ihned omýt vodou a mýdlem a dobře opláchnout.
 - **Při zasažení očí:** Otevřené oči po více minut oplachovat pod tekoucí vodou a poradit se s lékařem.
 - **Při požití:**
Ihned vyhledat lékaře.
Bohatě zapít vodou a dýchat čerstvý vzduch. Neprodleně vyhledat lékaře.
 - **4.2 Nejdůležitější akutní a opožděné symptomy a účinky** Další relevantní informace nejsou k dispozici.
 - **4.3 Pokyn týkající se okamžité lékařské pomoci a zvláštního ošetření**
Další relevantní informace nejsou k dispozici.

ODDÍL 5: Opatření pro hašení požáru

- **5.1 Hasiva**
- **Vhodná hasiva:**
CO₂, hasící prášek nebo rozstříkované vodní paprsky. Větší ohně zdotat rozstříkovanými vodními paprsky nebo pěnou odolnou vůči alkoholu.
- **5.2 Zvláštní nebezpečnost vyplývající z látky nebo směsi** Další relevantní informace nejsou k dispozici.
- **5.3 Pokyny pro hasiče**
- **Zvláštní ochranné prostředky pro hasiče:** Použít ochranný dýchací přístroj.

ODDÍL 6: Opatření v případě náhodného úniku

- **6.1 Opatření na ochranu osob, ochranné prostředky a nouzové postupy**
Nosit ochrannou výstroj. Nechráněné osoby se nesmí přibližovat.
- **6.2 Opatření na ochranu životního prostředí:**
Zředit velkým množstvím vody.
Nenechat proniknout do kanalizace/povrchových vod/podzemních vod.
- **6.3 Metody a materiál pro omezení úniku a pro čištění:**
Sebrat s materiály, vázicemi kapaliny (písek, šterkový písek, pojidla kyselin, universální pojidla, piliny).
Použít neutralizační prostředky.
Kontaminovaný materiál odstranit jako odpad podle bodu 13.
Zajistit dostatečné větrání.
- **6.4 Odkaz na jiné oddíly**
Informace o bezpečnému zacházení viz kapitola 7.
Informace o osobní ochranné výstroji viz kapitola 8.
Informace k odstranění viz kapitola 13.

ODDÍL 7: Zacházení a skladování

- **7.1 Opatření pro bezpečné zacházení**
Na pracovišti zabezpečit dobré větrání a odsávání.
Nádrž opatrně otevřít a zacházet s ní opatrně.
Zamezit vytváření aerosolů.
- **Upozornění k ochraně před ohněm a explozí:** Mít připravené ochranné dýchací přístroje.
- **7.2 Podmínky pro bezpečné skladování látek a směsí včetně neslučitelných látek a směsí**
- **Pokyny pro skladování:**
- **Požadavky na skladovací prostory a nádoby:** Žádné zvláštní požadavky.

(pokračování na straně 4)

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(pokračování strany 3)

- **Upozornění k hromadnému skladování:** Není nutné.
- **Další údaje k podmínkám skladování:** Nádrž držet neprodyšně uzavřenou.
- **7.3 Specifické konečné / specifická konečná použití** Další relevantní informace nejsou k dispozici.

ODDÍL 8: Omezování expozice / osobní ochranné prostředky

- **Technická opatření:** Žádné další údaje, viz bod 7.

8.1 Kontrolní parametry

- **Kontrolní parametry:**

50-00-0 Formaldehyd

NPK	Krátkodobá hodnota: 1 mg/m ³ Dlouhodobá hodnota: 0,5 mg/m ³ I, S
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- **Další upozornění:** Jako podklad sloužily při zhotovení platné listiny.

8.2 Omezování expozice

Osobní ochranné prostředky:

- **Všeobecná ochranná a hygienická opatření:**

Zdržovat od potravin, nápojů a krmiv.

Zašpiněné, nasáknuté šaty ihned vysvléci.

Před přestávkami a po práci umýt ruce.

Ochranný oděv odděleně přechovávat.

Zamezit styku se zrakem.

Zamezit styku s pokožkou a zrakem.

- **Ochrana dýchacích orgánů:**

Při krátkodobém nebo nízkém zatížení použít dýchací přístroj s filtrem, při intenzivním nebo delším zatížení se musí použít dýchací přístroj nezávislý na okolním vzduchu.

- **Ochrana rukou:**



Ochranné rukavice

Materiál rukavic musí být nepropustný a odolný proti produktu / látce / směsi.

Vzhledem k tomu, že chybí testy, není možné doporučit materiál rukavic pro produkt / přípravek / chemickou směs.

Výběr materiálu rukavic proveďte podle času průniku, permeability a degradace.

- **Materiál rukavic**

Správný výběr rukavic nezávisí jen na materiálu, ale také na dalších kritériích, která se liší podle výrobce. Protože je výrobek směs více látek, nelze materiál rukavic předem vypočítat a je nutno udělat před použitím zkoušku.

- **Doba průniku materiálem rukavic**

Je nutno u výrobce rukavic zjistit a dodržovat přesné časy průniku materiálem ochranných rukavic.

- **Ochrana očí:**



Uzavřené ochranné brýle

-CZ-

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ODDÍL 9: Fyzikální a chemické vlastnosti

· 9.1 Informace o základních fyzikálních a chemických vlastnostech

· Všeobecné údaje

· Vzhled:

Skupenství:	Tekutina
-------------	----------

Barva:	Jasná
--------	-------

· Zápach:	Charakteristický
-----------	------------------

· Prahová hodnota zápachu:	Není určeno.
----------------------------	--------------

· Hodnota pH při 20 °C:	2,8
-------------------------	-----

· Změna stavu

Bod tání/bod tuhnutí:	Není určeno.
-----------------------	--------------

Počáteční bod varu a rozmezí bodu varu:	>93 °C
---	--------

· Bod vzplanutí:	>60 °C
------------------	--------

· Hořlavost (pevné látky, plyny):	Nedá se použít.
-----------------------------------	-----------------

· Zápalná teplota:	300 °C
--------------------	--------

· Teplota rozkladu:	Není určeno.
---------------------	--------------

· Teplota samovznícení:	Produkt není samozápalný.
-------------------------	---------------------------

· Výbušné vlastnosti:	Není určeno.
-----------------------	--------------

· Meze výbušnosti:

Dolní mez:	7 Vol %
------------	---------

Horní mez:	73 Vol %
------------	----------

· Tlak páry při 20 °C:	23 hPa
------------------------	--------

· Hustota při 20 °C:	0,9392 g/cm ³
----------------------	--------------------------

· Relativní hustota	Není určeno.
---------------------	--------------

· Hustota páry:	Není určeno.
-----------------	--------------

· Rychlost odpařování	Není určeno.
-----------------------	--------------

· Rozpustnost ve / směřitelnost s

vodě:	Úplně mísitelná.
-------	------------------

· Rozdělovací koeficient: n-oktanol/voda:	Není určeno.
---	--------------

· Viskozita:

Dynamicky:	Není určeno.
------------	--------------

Kinematicky:	Není určeno.
--------------	--------------

· Obsah ředidel:

Organická ředidla:	32,0 %
--------------------	--------

Voda:	68,0 %
-------	--------

VOC (EC)	32,00 %
----------	---------

Obsah netěkavých složek:	0,0 %
--------------------------	-------

· 9.2 Další informace	Další relevantní informace nejsou k dispozici.
-----------------------	--

ODDÍL 10: Stálost a reaktivita

· 10.1 Reaktivita	Další relevantní informace nejsou k dispozici.
-------------------	--

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- **10.2 Chemická stabilita**
- **Termický rozklad / Podmínky, kterých je nutno se vyvarovat:**
Nedochází k rozkladu při doporučeném způsobu použití.
- **10.3 Možnost nebezpečných reakcí** Žádné nebezpečné reakce nejsou známy.
- **10.4 Podmínky, kterým je třeba zabránit** Další relevantní informace nejsou k dispozici.
- **10.5 Neslučitelné materiály:** Další relevantní informace nejsou k dispozici.
- **10.6 Nebezpečné produkty rozkladu:** Nejsou známy žádné nebezpečné produkty při rozkladu.

ODDÍL 11: Toxikologické informace

· 11.1 Informace o toxikologických účincích

· Akutní toxicita

Zdraví škodlivý při požití.

Toxický při styku s kůží a při vdechování.

· Zařazení relevantní hodnoty LD/LC 50:

50-00-0 Formaldehyd

Orálně LD50 >200 mg/kg (rat)

· Primární dráždivé účinky:

· Žíravost/dráždivost pro kůži

Způsobuje těžké poleptání kůže a poškození očí.

· Vážné poškození očí / podráždění očí

Způsobuje vážné poškození očí.

· Senzibilizace dýchacích cest / senzibilizace kůže

Může vyvolat alergickou kožní reakci.

· Účinky CMR (karcinogenita, mutagenita a toxicita pro reprodukci)

· Mutagenita v zárodečných buňkách

Podezření na genetické poškození.

· Karcinogenita

Může vyvolat rakovinu.

· Toxicita pro reprodukci

 Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.

· Toxicita pro specifické cílové orgány – jednorázová expozice

Může způsobit podráždění dýchacích cest.

· Toxicita pro specifické cílové orgány – opakovaná expozice

Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.

· Nebezpečnost při vdechnutí

 Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.

ODDÍL 12: Ekologické informace

· 12.1 Toxicita

· Aquatická toxicita:

 Další relevantní informace nejsou k dispozici.

· 12.2 Perzistence a rozložitelnost

 Další relevantní informace nejsou k dispozici.

· 12.3 Bioakumulační potenciál

 Další relevantní informace nejsou k dispozici.

· 12.4 Mobilita v půdě

 Další relevantní informace nejsou k dispozici.

· Další ekologické údaje:

· Všeobecná upozornění:

Třída ohrožení vody 2 (Samozařazení): ohrožuje vodu

Nesmí vniknout do spodní vody, povodí nebo kanalizace.

Nesmí nezředěno nebo nezneutralizováno proniknout do odpadních vod nebo jímek.

Ohrožuje pitnou vodu už při proniknutí malého množství do zeminy.

· 12.5 Výsledky posouzení PBT a vPvB

· PBT:

 Nedá se použít.

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- **vPvB:** Nedá se použít.
- **12.6 Jiné nepříznivé účinky** Další relevantní informace nejsou k dispozici.

ODDÍL 13: Pokyny pro odstraňování

- **13.1 Metody nakládání s odpady**
- **Doporučení:** Nesmí se odstraňovat společně s odpady z domácnosti. Nepřipustit únik do kanalizace.
- **Kontaminované obaly:**
- **Doporučení:** Odstranění podle příslušných předpisů.
- **Doporučený čisticí prostředek:** Voda, případně s přísadami čisticích prostředků.

ODDÍL 14: Informace pro přepravu

- **14.1 UN číslo**
- **ADR, IMDG, IATA** UN2209
- **14.2 Oficiální (OSN) pojmenování pro přepravu**
- **ADR** 2209 FORMALDEHYD, ROZTOK
- **IMDG, IATA** FORMALDEHYDE SOLUTION

- **14.3 Třída/třídy nebezpečnosti pro přepravu**

- **ADR, IMDG, IATA**



- **třída** 8 Žíravé látky
- **Etiketa** 8

- **14.4 Obalová skupina**

- **ADR, IMDG, IATA** III

- **14.5 Nebezpečnost pro životní prostředí:** Nedá se použít.

- **14.6 Zvláštní bezpečnostní opatření pro uživatele** Varování: Žíravé látky

- **Kemlerovo číslo:** 80
- **EMS-skupina:** F-A,S-B
- **Stowage Category** A

- **14.7 Hromadná přeprava podle přílohy II úmluvy**

MARPOL a předpisu IBC Nedá se použít.

- **Přeprava/další údaje:**

- **ADR**
- **Omezené množství (LQ)** 5L
- **Vyňatá množství (EQ)** Kód: E1
Nejvyšší čisté množství na vnitřní obal: 30 ml
Nejvyšší čisté množství na vnější obal: 1000 ml
- **Přepavní kategorie** 3
- **Kód omezení pro tunely:** E

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- | | |
|--|--|
| <ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) | <p>5L
Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml</p> |
| <ul style="list-style-type: none"> · UN "Model Regulation": | <p>UN 2209 FORMALDEHYD, ROZTOK, 8, III</p> |

ODDÍL 15: Informace o předpisech

- **15.1 Předpisy týkající se bezpečnosti, zdraví a životního prostředí/specifické právní předpisy týkající se látky nebo směsi**
- **Rady 2012/18/EU**
- **Nebezpečné látky jmenovitě uvedené - PŘÍLOHA I** Žádná z obsažených látek není na seznamu.
- **Kategorie Seveso H2 AKUTNÍ TOXICITA**
- **Kvalifikační množství (v tunách) při uplatnění požadavků pro podlimitní množství 50 t**
- **Kvalifikační množství (v tunách) při uplatnění požadavků pro nadlimitní množství 200 t**
- **Rady (ES) č. 1907/2006 PŘÍLOHA XVII** Omezující podmínky: 3, 28
- **Národní předpisy:**
- **Upozornění na omezení práce:**
Pracovníci nesmí přijít do styku s nebezpečnými látkami způsobujícími rakovinu, obsaženými v tomto přípravku. V jednotlivých případech mohou úřady povolit výjimku.
- **15.2 Posouzení chemické bezpečnosti:** Posouzení chemické bezpečnosti nebylo provedeno.

ODDÍL 16: Další informace

Údaje se opírají o dnešní stav našich vědomostí, nepředstavují však záruku vlastností produktu a nevznikají tak žádné smluvní právní vztahy.

- **Relevantní věty**
H301 Toxický při požití.
H311 Toxický při styku s kůží.
H314 Způsobuje těžké poleptání kůže a poškození očí.
H317 Může vyvolat alergickou kožní reakci.
H331 Toxický při vdechování.
H341 Podezření na genetické poškození.
H350 Může vyvolat rakovinu.
- **Zkratky a akronymy:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 3: Akutní toxicita – Kategorie 3
Acute Tox. 4: Akutní toxicita – Kategorie 4
Skin Corr. 1B: Žíravost/dráždivost pro kůži – Kategorie 1B

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Eye Dam. 1: Vážné poškození očí / podráždění očí – Kategorie 1

Skin Sens. 1: Senzibilizace kůže – Kategorie 1

Muta. 2: Mutagenita v zárodečných buňkách – Kategorie 2

Carc. 1B: Karcinogenita – Kategorie 1B

STOT SE 3: Toxicita pro specifické cílové orgány (jednorázová expozice) – Kategorie 3

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PUNKT 1: Identifikation af stoffet/blandingen og af selskabet/virksomheden

- **1.1 Produktidentifikator**
- **Handelsnavn: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE**
- **Artikelnummer: 15714, 15714-S, 15714-1L, 15714-SP**
- **1.2 Relevante identificerede anvendelser for stoffet eller blandingen samt anvendelser, der frarådes**
Der står ingen yderligere, relevante informationer til rådighed.
- **Stoffets/præparatets anvendelse** Laboratoriekemikalier
- **1.3 Nærmere oplysninger om leverandøren af sikkerhedsdatabladet**
- **Producent/leverandør**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **For yderligere information: Product safety department**
- **1.4 Nødtelefon:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

PUNKT 2: Fareidentifikation

- **2.1 Klassificering af stoffet eller blandingen**
- **Klassificering i henhold til forordning (EF) nr. 1272/2008**



GHS06 dødningshoved og korslagte knogler

Acute Tox. 3 H311 Giftig ved hudkontakt.

Acute Tox. 3 H331 Giftig ved indånding.



GHS08 sundhedsfarer

Muta. 2 H341 Mistænkt for at forårsage genetiske defekter.

Carc. 1B H350 Kan fremkalde kræft.



GHS05 ætsning

Skin Corr. 1B H314 Forårsager svære forbrændinger af huden og øjenskader.

Eye Dam. 1 H318 Forårsager alvorlig øjenskade.



GHS07

Acute Tox. 4 H302 Farlig ved indtagelse.

Skin Sens. 1 H317 Kan forårsage allergisk hudreaktion.

STOT SE 3 H335 Kan forårsage irritation af luftvejene.

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- **2.2 Mærkningselementer**
- **Mærkning i henhold til forordning (EF) nr. 1272/2008**
Dette produkt er klassificeret og mærket iht. CLP-forordningen.
- **Farepiktogrammer**



GHS05 GHS06 GHS08

- **Signalord Fare**
- **Farebestemmende komponent(er) til etikettering:**
formaldehyd
- **Faresætninger**
 - H302 Farlig ved indtagelse.
 - H311+H331 Livsfarlig ved hudkontakt eller indånding.
 - H314 Forårsager svære forbrændinger af huden og øjenskader.
 - H317 Kan forårsage allergisk hudreaktion.
 - H341 Mistænkt for at forårsage genetiske defekter.
 - H350 Kan fremkalde kræft.
 - H335 Kan forårsage irritation af luftvejene.
- **Sikkerhedssætninger**
 - P303+P361+P353 **VED KONTAKT MED HUDEN (eller håret):** Alt tilsmudset tøj tages straks af. Skyl/brus huden med vand.
 - P305+P351+P338 **VED KONTAKT MED ØJNENE:** Skyl forsigtigt med vand i flere minutter. Fjern eventuelle kontaktlinser, hvis dette kan gøres let. Fortsæt skylning.
 - P310 Ring omgående til en GIFTINFORMATION/læge.
 - P321 Særlig behandling (se på denne etiket).
 - P361+P364 Alt tilsmudset tøj tages straks af og vaskes inden genanvendelse.
 - P405 Opbevares under lås.
 - P501 Bortskaffelse af indholdet/beholderen i henhold til de lokale/regionale/nationale/internationale forskrifter.
- **2.3 Andre farer**
- **Resultater af PBT- og vPvB-vurdering**
- **PBT:** Ikke relevant.
- **vPvB:** Ikke relevant.

PUNKT 3: Sammensætning af/oplysning om indholdsstoffer

- **3.2 Kemisk betegnelse: Blandinger**
- **Beskrivelse:** Blanding med nedenstående stoffer med ufarlige tilsætningsstoffer.

· Farlige indholdsstoffer:

CAS: 50-00-0	formaldehyd	>25-≤50%
EINECS: 200-001-8	☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ Muta. 2, H341; Carc. 1B, H350; ☠ Skin Corr. 1B, H314; ☠ Skin Sens. 1, H317	

- **Yderligere anvisninger:** Teksten til de anførte farehenvísninger fremgår af kapitel 16.

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PUNKT 4: Førstehjælpsforanstaltninger

· 4.1 Beskrivelse af førstehjælpsforanstaltninger

· **Generelle anvisninger:**

Tøj, der er forurennet med produktet, skal tages af med det samme.

Forgiftningssymptomer kan optræde med mange timers forsinkelse, derfor skal lægeovervågningen vare mindst 48 timer efter et uheld.

Åndedrætsværnet må først tages af, efter at det forurenede tøj er blevet fjernet.

I tilfælde af uregelmæssigt åndedræt eller hvis åndedrættet ophører, skal der gives kunstigt åndedræt.

· **Efter indånding:**

Tilførsel af frisk luft eller ilt. Søg lægehjælp.

I tilfælde af bevidstløshed skal den tilskadekomne lægges ned og transporteres i stabilt sideleje.

· **Efter hudkontakt:** Skal omgående vaskes af med vand og sæbe, skyl godt efter.

· **Efter øjenkontakt:** Skyl øjnene med åbent øjenlåg i flere minutter under rindende vand og søg læge.

· **Efter indtagelse:**

Søg læge.

Drik rigeligt vand og sørg for frisk luft. Tilkald omgående læge.

· 4.2 Vigtigste symptomer og virkninger, både akutte og forsinkede

Der står ingen yderligere, relevante informationer til rådighed.

· 4.3 Angivelse af om øjeblikkelig lægehjælp og særlig behandling er nødvendig

Der står ingen yderligere, relevante informationer til rådighed.

PUNKT 5: Brandbekæmpelse

· 5.1 Slukningsmidler

· **Egnede slukningsmidler:**

CO₂, slukningspulver eller vandspraystråle. Større brande bekæmpes med vandspraystråle eller alkoholbestandigt skum.

· 5.2 Særlige farer i forbindelse med stoffet eller blandingen

Der står ingen yderligere, relevante informationer til rådighed.

· 5.3 Anvisninger for brandmandskab

· **Særlige værnemidler:** Bær åndedrætsværn.

PUNKT 6: Forholdsregler over for udslip ved uheld

· 6.1 Personlige sikkerhedsforanstaltninger, personlige værnemidler og nødprocedurer

Bær beskyttelsesudstyr. Hold ubeskyttede personer borte.

· 6.2 Miljøbeskyttelsesforanstaltninger:

Fortynd med rigeligt vand.

Må ikke udledes i kloaksystemet/overfladevand/grundvand.

· 6.3 Metoder og udstyr til inddæmning og oprensning:

Opsamles med væskebindende materiale (sand, kiselgur, syrebindemiddel, universalbindemiddel, savsmuld).

Brug neutraliseringsmiddel.

Kontamineret materiale skal bortskaffes som affald ifølge punkt 13.

Sørg for tilstrækkelig udluftning.

· 6.4 Henvisning til andre punkter

Information om sikker håndtering se kapitel 7.

Informationer vedrørende personlige værnemidler se kapitel 8.

Informationer om bortskaffelse se kapitel 13.

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PUNKT 7: Håndtering og opbevaring

· 7.1 Forholdsregler for sikker håndtering

Sørg for god udluftning/udsugning på arbejdspladsen.

Beholdere skal åbnes og håndteres med forsigtighed.

Undgå aerosoldannelse.

· **Anvisninger vedrørende brand- og eksplosionsbeskyttelse:** Hold åndedrætsværn i beredskab.

· 7.2 Betingelser for sikker opbevaring, herunder eventuel uforenelighed

· Opbevaring:

· **Krav til opbevaringsrum og beholdere:** Ingen særlige krav.

· **Henvisninger vedrørende opbevaring med andre stoffer:** Ikke påkrævet.

· **Yderligere oplysninger vedrørende opbevaringsbetingelserne:** Hold beholderen tætsluttende lukket.

· **7.3 Særlige anvendelser** Der står ingen yderligere, relevante informationer til rådighed.

PUNKT 8: Eksponeringskontrol/personlige værnemidler

· **Yderligere anvisninger vedrørende udformning af tekniske anlæg:** Ingen yderligere oplysninger, se punkt 7.

· 8.1 Kontrolparametre

· **Indholdsstoffer med arbejdspladsrelaterede grænseværdier, der skal overvåges:**

50-00-0 formaldehyd

GV Loftværdi: 0,4 mg/m³, 0,3 ppm

LK

· **Yderligere anvisninger:** Baseret på de lister, der var gældende på tidspunktet for udarbejdelsen.

· 8.2 Eksponeringskontrol

· Personlige værnemidler:

· **Generelle forholdsregler vedrørende beskyttelse og hygiejne:**

Skal holdes borte fra føde- og drikkevarer og foderstoffer.

Forurenet, gennemvædet tøj skal det tages af med det samme.

Vask hænder inden der holdes pause og ved arbejdsophør.

Adskilt opbevaring af beskyttelsesklædning.

Undgå kontakt med øjnene.

Undgå kontakt med øjne og hud.

· Åndedrætsværn:

Ved kortvarig eller ringe belastning skal der benyttes åndedrætsværn med filter, ved intensiv eller længere eksponering skal der benyttes luftforsynet åndedrætsværn.

· Håndbeskyttelse:



Beskyttelseshandsker

Handskematerialet skal være uigennemtrængeligt og kunne tåle produktet/stoffet/præparatet.

På grund af manglende tests kan der ikke anbefales noget handskemateriale til produktet/præparatet/kemikalieblanding.

Ved valg af handskematerialet skal der tages højde for gennemtrængningstider, permeabilitetstal og nedbrydning.

· Handskemateriale:

Valg af en egnet handske afhænger ikke blot af materialet, men også af yderligere kvalitetskriterier og er forskelligt fra den ene fabrikant til den anden. Da produktet er et præparat af flere forskellige stoffer, kan handskematerialernes bestandighed ikke beregnes på forhånd og skal derfor efterprøves inden brugen.

· Handskematerialets gennemtrængningstid

Hos handskefabrikanten skal man forespørge om den nøjagtige gennemtrængningstid og overholde denne.

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· **Øjenbeskyttelse:**



Tætsluttende beskyttelsesbriller

PUNKT 9: Fysiske og kemiske egenskaber

· **9.1 Oplysninger om grundlæggende fysiske og kemiske egenskaber**

· **Generelle oplysninger**

· **Udseende:**

Form:	Væske
Farve:	Klar
· Lugt:	Karakteristisk
· Lugttærskel:	Ikke bestemt.

· **pH-værdi ved 20 °C:** 2,8

· **Tilstandsændring**

Smeltepunkt/frysepunkt:	Ikke bestemt.
Begyndelseskogepunkt og kogepunktsinterval:	>93 °C

· **Flammepunkt:** >60 °C

· **Antændelighed (fast stof, luftart):** Ikke relevant.

· **Antændelsepunkt:** 300 °C

· **Dekomponeringstemperatur:** Ikke bestemt.

· **Selvantændelsestemperatur:** Produktet er ikke selvantændeligt.

· **Eksplorative egenskaber:** Ikke bestemt.

· **Eksplisionsgrænser:**

Nedre:	7 Vol %
Øvre:	73 Vol %

· **Damptryk ved 20 °C:** 23 hPa

· **Densitet ved 20 °C:** 0,9392 g/cm³

· **Relativ massefylde:** Ikke bestemt.

· **Dampmassefylde:** Ikke bestemt.

· **Fordampningshastighed** Ikke bestemt.

· **Opløselighed i/blandbarhed med vand:**

Fuldt blandbar.

· **Fordelingskoefficient: n-oktanol/vand:** Ikke bestemt.

· **Viskositet:**

dynamisk:	Ikke bestemt.
kinematisk:	Ikke bestemt.

· **Opløsningsmiddelindhold:**

Organiske opløsningsmidler:	32,0 %
Vand	68,0 %
VOC (EU)	32,00 %

· **Tørstofindhold:** 0,0 %

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· 9.2 Andre oplysninger

Der står ingen yderligere, relevante informationer til rådighed.

PUNKT 10: Stabilitet og reaktivitet

- **10.1 Reaktivitet** Der står ingen yderligere, relevante informationer til rådighed.
- **10.2 Kemisk stabilitet**
- **Termisk nedbrydning/forhold, der bør undgås** Ingen nedbrydning ved formålsbestemt brug.
- **10.3 Risiko for farlige reaktioner** Der er ikke kendskab til nogen farlige reaktioner.
- **10.4 Forhold, der skal undgås** Der står ingen yderligere, relevante informationer til rådighed.
- **10.5 Materialer, der skal undgås:** Der står ingen yderligere, relevante informationer til rådighed.
- **10.6 Farlige nedbrydningsprodukter:** Der er ikke kendskab til nogen farlige nedbrydningsprodukter.

PUNKT 11: Toksikologiske oplysninger

- **11.1 Oplysninger om toksikologiske virkninger**
 - **Akut toksicitet**
Farlig ved indtagelse.
Livsfarlig ved hudkontakt eller indånding.
 - **Klassificeringsrelevante LD/LC50-værdier:**
- | | | |
|----------------------------|------|------------------|
| 50-00-0 formaldehyd | | |
| Oral | LD50 | >200 mg/kg (rat) |
- **Primær irritationsvirkning:**
 - **Hudætsning/-irritation**
Forårsager svære forbrændinger af huden og øjenskader.
 - **Alvorlig øjenskade/øjenirritation**
Forårsager alvorlig øjenskade.
 - **Respiratorisk sensibilisering eller hudsensibilisering**
Kan forårsage allergisk hudreaktion.
 - **CMR-virkninger (kræftfremkaldende egenskaber, mutagenicitet og reproduktionstoksicitet)**
 - **Kimcellemutagenicitet**
Mistænkt for at forårsage genetiske defekter.
 - **Kræftfremkaldende egenskaber**
Kan fremkalde kræft.
 - **Reproduktionstoksicitet**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
 - **Enkel STOT-eksponering**
Kan forårsage irritation af luftvejene.
 - **Gentagne STOT-eksponeringer**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
 - **Aspirationsfare**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.

PUNKT 12: Miljøoplysninger

- **12.1 Toksicitet**
- **Toksicitet i vand:** Der står ingen yderligere, relevante informationer til rådighed.
- **12.2 Persistens og nedbrydelighed** Der står ingen yderligere, relevante informationer til rådighed.
- **12.3 Bioakkumuleringspotentiale** Der står ingen yderligere, relevante informationer til rådighed.
- **12.4 Mobilitet i jord** Der står ingen yderligere, relevante informationer til rådighed.

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- **Yderligere økologiske oplysninger:**
- **Generelle anvisninger:**
 - Fareklasse for vand 2 (Selyklassificering): vandforurenende
 - Må ikke udledes i grundvandet, vandløb eller kloaksystemet.
 - Må ikke udledes ufortyndet eller unneutraliseret i spildevandet eller recipienten.
 - Risiko for forurening af drikkevandet allerede ved udslip af små mængder i undergrunden.
- **12.5 Resultater af PBT- og vPvB-vurdering**
- **PBT:** Ikke relevant.
- **vPvB:** Ikke relevant.
- **12.6 Andre negative virkninger** Der står ingen yderligere, relevante informationer til rådighed.

PUNKT 13: Bortskaffelse

- **13.1 Metoder til affaldsbehandling**
- **Anbefaling:** Må ikke bortskaffes sammen med husholdningsaffald. Må ikke udledes i kloaksystemet.
- **Urensede emballager:**
- **Anbefaling:** Bortskaffes i overensstemmelse med myndighedernes forskrifter.
- **Anbefalet rengøringsmiddel:** Vand, eventuelt tilsat rengøringsmidler.

PUNKT 14: Transportoplysninger

- | | |
|--|---|
| · 14.1 UN-nummer | |
| · ADR, IMDG, IATA | UN2209 |
| · 14.2 UN-forsendelsesbetegnelse (UN proper shipping name) | |
| · ADR | 2209 FORMALDEHYDOPLØSNING |
| · IMDG, IATA | FORMALDEHYDE SOLUTION |
| · 14.3 Transportfareklasse(r) | |
| · ADR, IMDG, IATA | |
| |  |
| · klasse | 8 Ætsende stoffer |
| · Faremærkat | 8 |
| · 14.4 Emballagegruppe | |
| · ADR, IMDG, IATA | III |
| · 14.5 Miljøfarer: | Ikke relevant. |
| · 14.6 Særlige forsigtighedsregler for brugeren | Advarsel: Ætsende stoffer |
| · Kemler-tal: | 80 |
| · EMS-nummer: | F-A,S-B |
| · Stowage Category | A |
| · 14.7 Bulktransport i henhold til bilag II til MARPOL og IBC-koden | Ikke relevant. |

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· **Transport/yderligere oplysninger:**

· **ADR**

· **Begrænsede mængder (LQ)**

5L

· **Undtagne mængder (EQ)**

Kode: E1

Største tilladte nettomængde pr. indvendig emballage: 30 ml

Største tilladte nettomængde pr. ydre emballage: 1000 ml

· **Transportkategori**

3

· **Tunnelrestriktionskode**

E

· **IMDG**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":**

UN 2209 FORMALDEHYDOPLØSNING, 8, III

PUNKT 15: Oplysninger om regulering

· **15.1 Særlige bestemmelser/særlig lovgivning for stoffet eller blandingen med hensyn til sikkerhed, sundhed og miljø**

· **Direktiv 2012/18/EU**

· **Navngivne farlige stoffer - BILAG I** Ingen af indholdsstofferne er optaget i listen.

· **Seveso-bestemmelser H2 AKUT TOKSISK**

· **Tærskelmængde (tons) for anvendelse af Kolonne 2-krav** 50 t

· **Tærskelmængde (tons) for anvendelse af Kolonne 3-krav** 200 t

· **Forordning (EF) nr. 1907/2006 BILAG XVII** Begrænsninger: 3, 28

· **Nationale forskrifter:**

· **Oplysninger vedrørende beskæftigelsesbegrænsning:**

Arbejdstagere må ikke udsættes for de kræftfremkaldende farestoffer som dette præparat indeholder. I enkelte tilfælde kan myndighederne bevillige undtagelser.

· **MAL-Code:** 5-6

· **15.2 Kemikaliesikkerhedsvurdering:** Der er ikke udført kemikaliesikkerhedsvurdering.

PUNKT 16: Andre oplysninger

Alle ovenstående angivelser er baseret på vores aktuelle viden, udgør dog ikke nogen tilsikring af produktgenskaber og stifter heller ikke noget kontraktligt retsforhold.

· **Risikoangivelser**

H301 Giftig ved indtagelse.

H311 Giftig ved hudkontakt.

H314 Forårsager svære forbrændinger af huden og øjenskader.

H317 Kan forårsage allergisk hudreaktion.

H331 Giftig ved indånding.

H341 Mistænkt for at forårsage genetiske defekter.

H350 Kan fremkalde kræft.

· **Forkortelser og akronymer:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

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IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
Måleteknisk Arbejdshygiejnisk Luftbehov
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 3: Akut toksicitet – Kategori 3
Acute Tox. 4: Akut toksicitet – Kategori 4
Skin Corr. 1B: Hudætsning/hudirritation – Kategori 1B
Eye Dam. 1: Alvorlige øjenskader/øjenirritation – Kategori 1
Skin Sens. 1: Hudsensibilisering – Kategori 1
Muta. 2: Kimcellemutagenicitet – Kategori 2
Carc. 1B: Carcinogenicitet – Kategori 1B
STOT SE 3: Specifik målorgantoksicitet (enkelt eksponering) – Kategori 3

DK

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RUBRIEK 1: Identificatie van de stof of het mengsel en van de vennootschap/onderneming

- **1.1 Productidentificatie**
- **Handelsnaam:** PARAFORMALDEHYDE 32% SOLUTION, EM GRADE
- **Artikelnummer:** 15714, 15714-S, 15714-1L, 15714-SP
- **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**
Geen verdere relevante informatie verkrijgbaar.
- **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën
- **1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad**
- **Fabrikant/leverancier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Aurion**
Binnenhaven 5
6709 PD Wageningen
The Netherlands
Tel: 31 317 415094
Fax: 31 317 415955
email: info@aurion.nl
- **Inlichtingengevende sector:** Product safety department
- **1.4 Telefoonnummer voor noodgevallen:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIEK 2: Identificatie van de gevaren

- **2.1 Indeling van de stof of het mengsel**
- **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**



GHS06 doodshoofd met gekruiste beenderen

Acute Tox. 3 H311 Giftig bij contact met de huid.

Acute Tox. 3 H331 Giftig bij inademing.



GHS08 gezondheidsgevaar

Muta. 2 H341 Verdacht van het veroorzaken van genetische schade.

Carc. 1B H350 Kan kanker veroorzaken.



GHS05 corrosie

Skin Corr. 1B H314 Veroorzaakt ernstige brandwonden en oogletsel.

Eye Dam. 1 H318 Veroorzaakt ernstig oogletsel.

(Vervolg op blz. 2)

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GHS07

Acute Tox. 4 H302 Schadelijk bij inslikken.
 Skin Sens. 1 H317 Kan een allergische huidreactie veroorzaken.
 STOT SE 3 H335 Kan irritatie van de luchtwegen veroorzaken.

· 2.2 Etiketteringselementen

· Etikettering overeenkomstig Verordening (EG) nr. 1272/2008

Het product is geclassificeerd en geëtiketteerd volgens de CLP-verordening.

· Gevarenpictogrammen



GHS05 GHS06 GHS08

· Signaalwoord Gevaar

· Gevaaraanduidende componenten voor de etikettering:

formaldehyde

· Gevarenaanduidingen

H302 Schadelijk bij inslikken.
 H311+H331 Giftig bij contact met de huid en bij inademing.
 H314 Veroorzaakt ernstige brandwonden en oogletsel.
 H317 Kan een allergische huidreactie veroorzaken.
 H341 Verdacht van het veroorzaken van genetische schade.
 H350 Kan kanker veroorzaken.
 H335 Kan irritatie van de luchtwegen veroorzaken.

· Veiligheidsaanbevelingen

P303+P361+P353 BIJ CONTACT MET DE HUID (of het haar): verontreinigde kleding onmiddellijk uittrekken.
 Huid met water afspoelen/afdouchen.
 P305+P351+P338 BIJ CONTACT MET DE OGEN: voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.
 P310 Onmiddellijk een ANTIGIFCENTRUM/arts raadplegen.
 P321 Specifieke behandeling vereist (zie op dit etiket).
 P361+P364 Verontreinigde kleding onmiddellijk uittrekken en wassen alvorens deze opnieuw te gebruiken.
 P405 Achter slot bewaren.
 P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

· 2.3 Andere gevaren

· Resultaten van PBT- en zPzB-beoordeling

- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.

RUBRIEK 3: Samenstelling en informatie over de bestanddelen

· 3.2 Chemische karakterisering: Mengsels

· **Beschrijving:** Mengsel van na elkaar aangevoerde stoffen met ongevaarlijke bijmengingen.

· Gevaarlijke inhoudstoffen:

CAS: 50-00-0	formaldehyde	>25-≤50%
EINECS: 200-001-8	Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Skin Corr. 1B, H314; Skin Sens. 1, H317	

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· **Aanvullende gegevens:**

De woordelijke inhoud van de opgegeven aanwijzingen inzake de mogelijke gevaren is te vinden in hoofdstuk 16.

RUBRIEK 4: Eerstehulpmaatregelen

· **4.1 Beschrijving van de eerstehulpmaatregelen**

· **Algemene informatie:**

Verontreinigde kleding onmiddellijk uittrekken.

Het is mogelijk dat vergiftigingssymptomen pas na vele uren optreden. Om deze reden is medische controle gedurende minstens 48 uur na een ongeval noodzakelijk.

Ademhalingstoestel pas afnemen nadat de verontreinigde kleding verwijderd is.

Bij onregelmatige ademhaling of ademstilstand kunstmatige ademhaling toepassen.

· **Na het inademen:**

Verse lucht of zuurstof toedienen; deskundige medische hulp inroepen.

Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

· **Na huidcontact:** Onmiddellijk met water en zeep afwassen en goed naspoelen.

· **Na oogcontact:** Ogen met open ooglid een aantal minuten onder stromend water afspoelen en dokter raadplegen.

· **Na inslikken:**

Onmiddellijk arts raadplegen.

Drink zeer veel water en voer verse lucht aan. Onmiddellijk een dokter waarschuwen.

· **4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.

· **4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**

Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 5: Brandbestrijdingsmaatregelen

· **5.1 Blusmiddelen**

· **Geschikte blusmiddelen:**

CO₂, bluspoeder of waterstraal. Grotere brand met waterstraal bestrijden of met schuim, dat tegen alcohol bestand is.

· **5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**

Geen verdere relevante informatie verkrijgbaar.

· **5.3 Advies voor brandweerlieden**

· **Speciale beschermende kleding:** Ademhalingstoestel aantrekken.

RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

· **6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures**

Beschermende kleding aantrekken. Niet beschermde personen op afstand houden.

· **6.2 Milieuvoorzorgsmaatregelen:**

Met veel water verdunnen.

Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.

· **6.3 Insluitings- en reinigingsmethoden en -materiaal:**

Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.

Neutralisatiemiddel gebruiken.

Besmet materiaal zoals afval volgens punt 13 verwijderen.

Voor voldoende ventilatie zorgen.

· **6.4 Verwijzing naar andere rubrieken**

Informatie inzake veilig gebruik - zie hoofdstuk 7.

Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.

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Informatie inzake berging - zie hoofdstuk 13.

RUBRIEK 7: Hantering en opslag

- **7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**
 Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.
 Tanks voorzichtig openen en behandelen.
 Aërosolvorming vermijden.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** Ademhalingsstoestellen gereedhouden.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Geen bijzondere eisen.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:** Tanks ondoordringbaar gesloten houden.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.
- **8.1 Controleparameters**

· **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:**

50-00-0 formaldehyde

WGW	Korte termijn waarde: 0,5 mg/m ³ , 0,4 ppm
	Lange termijn waarde: 0,15 mg/m ³ , 0,1 ppm

- **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.
- **8.2 Maatregelen ter beheersing van blootstelling**
- **Persoonlijke beschermingsvoorzieningen:**
- **Algemene beschermings- en gezondheidsmaatregelen:**
 Verwijderd houden van eet- en drinkwaren.
 Verontreinigde kleding onmiddellijk uittrekken.
 Vóór de pauze en aan het einde van werktijd handen wassen.
 Beschermende kleding afzonderlijk bewaren.
 Aanraking met de ogen vermijden.
 Aanraking met de ogen en de huid vermijden.
- **Ademhalingsbescherming:**
 Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingsstoestel gebruiken.
- **Handbescherming:**



Veiligheidshandschoenen

Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.
 Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliënmengsel afgegeven worden.
 Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.

- **Handschoenmateriaal**

De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór

(Vervolg op blz. 5)

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het gebruik worden getest.

· **Doordringingstijd van het handschoenmateriaal**

De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.

· **Oogbescherming:**



Nauw aansluitende veiligheidsbril

RUBRIEK 9: Fysische en chemische eigenschappen

· **9.1 Informatie over fysische en chemische basiseigenschappen**

· **Algemene gegevens**

· **Voorkomen:**

Vorm:	Vloeistof
Kleur:	Helder
· Geur:	Karakteristiek
· Geurdrempelwaarde:	Niet bepaald.

· **pH-waarde bij 20 °C:** 2,8

· **Toestandsverandering**

Smelt-/vriespunt:	Niet bepaald.
Beginkookpunt en kooktraject:	>93 °C

· **Vlampunt:** >60 °C

· **Ontvlambaarheid (vast, gas):** Niet bruikbaar.

· **Ontstekingstemperatuur:** 300 °C

· **Ontledingstemperatuur:** Niet bepaald.

· **Zelfontbrandingstemperatuur:** Het produkt ontbrandt niet uit zichzelf.

· **Ontploffingseigenschappen:** Niet bepaald.

· **Ontploffingsgrenzen:**

Onderste:	7 Vol %
Bovenste:	73 Vol %

· **Dampspanning bij 20 °C:** 23 hPa

· **Dichtheid bij 20 °C:** 0,9392 g/cm³

· **Relatieve dichtheid** Niet bepaald.

· **Dampdichtheid** Niet bepaald.

· **Verdampingssnelheid** Niet bepaald.

· **Oplosbaarheid in/mengbaarheid met**

Water: Volledig mengbaar.

· **Verdelingscoëfficiënt: n-octanol/water:** Niet bepaald.

· **Viscositeit**

Dynamisch:	Niet bepaald.
Kinematisch:	Niet bepaald.

· **Oplosmiddelgehalte:**

Organisch oplosmiddel: 32,0 %

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Water:	68,0 %
VOC (EG)	32,00 %
Gehalte aan vaste bestanddelen:	0,0 %
· 9.2 Overige informatie	Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 10: Stabiliteit en reactiviteit

- **10.1 Reactiviteit** Geen verdere relevante informatie verkrijgbaar.
- **10.2 Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** Geen afbraak bij gebruik volgens voorschrift.
- **10.3 Mogelijke gevaarlijke reacties** Geen gevaarlijke reacties bekend.
- **10.4 Te vermijden omstandigheden** Geen verdere relevante informatie verkrijgbaar.
- **10.5 Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **10.6 Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
 - **Acute toxiciteit**
Schadelijk bij inslikken.
Giftig bij contact met de huid en bij inademing.
 - **Indelingsrelevantie LD/LC50-waarden:**
- | | | |
|-----------------------------|------|------------------|
| 50-00-0 formaldehyde | | |
| Oraal | LD50 | >200 mg/kg (rat) |
- **Primaire aandoening:**
 - **Huidcorrosie/-irritatie**
Veroorzaakt ernstige brandwonden en oogletsel.
 - **Ernstig oogletsel/oogirritatie**
Veroorzaakt ernstig oogletsel.
 - **Sensibilisatie van de luchtwegen/de huid**
Kan een allergische huidreactie veroorzaken.
 - **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
 - **Mutageniteit in geslachtscellen**
Verdacht van het veroorzaken van genetische schade.
 - **Kankerverwekkendheid**
Kan kanker veroorzaken.
 - **Giftigheid voor de voortplanting** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
 - **STOT bij eenmalige blootstelling**
Kan irritatie van de luchtwegen veroorzaken.
 - **STOT bij herhaalde blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
 - **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.

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- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL): Z(1) niet afbreekbare stoffen met gevaarlijke eigenschappen voor mens en milieu (carcinogeniteit/mutageniteit/ reprotoxiciteit/bioacumulerend vermogen/ toxiciteit of persistentie)
Gevaar voor water klasse 2 (D) (Zelfclassificatie): gevaar voor water
Niet lozen in grondwater, in oppervlaktewater of in riolering.
Mag niet onverdund of niet geneutraliseerd in oppervlaktewater of in afwateringskanaal geloosd worden.
Gevaar voor drinkwater zelfs bij uitlopen van geringe hoeveelheden in de ondergrond.
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terecht komen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.
- **Aanbevolen reinigingsmiddel:** Water, eventueel met toevoeging van reinigingsmiddelen.

RUBRIEK 14: Informatie met betrekking tot het vervoer

- | | |
|---|--------------------------------|
| · 14.1 VN-nummer | UN2209 |
| · ADR, IMDG, IATA | |
| · 14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN | 2209 FORMALDEHYDE, OPLOSSING |
| · ADR | FORMALDEHYDE SOLUTION |
| · IMDG, IATA | |
| · 14.3 Transportgevaarklasse(n) | |
| · ADR, IMDG, IATA | |
|  | |
| · klasse | 8 Bijtende stoffen |
| · Etiket | 8 |
| · 14.4 Verpakkingsgroep: | |
| · ADR, IMDG, IATA | III |
| · 14.5 Milieugevaar: | Niet bruikbaar. |
| · 14.6 Bijzondere voorzorgen voor de gebruiker | Waarschuwing: Bijtende stoffen |
| · Kemler-getal: | 80 |
| · EMS-nummer: | F-A,S-B |
| · Stowage Category | A |
| · 14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code | Niet bruikbaar. |

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· Transport/verdere gegevens:

· ADR

· **Beperkte hoeveelheden (LQ)**

5L

· **Uitgezonderde hoeveelheden (EQ)**

Code: E1

Grootste netto hoeveelheid per binnenverpakking: 30 ml

Grootste netto hoeveelheid per buitenverpakking: 1000 ml

· **Vervoerscategorie**

3

· **Tunnelbeperkingscode**

E

· IMDG

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **VN "Model Regulation":**

UN 2209 FORMALDEHYDE, OPLOSSING, 8, III

RUBRIEK 15: Regelgeving

· **15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel**

· **SZW-lijst van kankerverwekkende stoffen**

50-00-0	formaldehyde
---------	--------------

· **SZW-lijst van mutagene stoffen**

geen der bestanddelen staat op de lijst.

· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid**

geen der bestanddelen staat op de lijst.

· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling**

geen der bestanddelen staat op de lijst.

· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding**

geen der bestanddelen staat op de lijst.

· **Richtlijn 2012/18/EU**

· **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I** geen der bestanddelen staat op de lijst.

· **Seveso-categorie H2 ACUUT TOXISCH**

· **Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen 50 t**

· **Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen 200 t**

· **Verordening (EG) nr. 1907/2006 BIJLAGE XVII Beperkingsvoorwaarden: 3, 28**

· **Nationale voorschriften:**

· **Aanwijzingen m.b.t. tewerkstellingsbeperking:**

Werknemers mogen aan de kankerverwekkende gevaarlijke stoffen van deze toebereiding niet blootgesteld worden. In uitzonderingsgevallen kan de overheid speciale vergunningen afgeven.

· **Gevaarklasse v. water:**

Waterbezwaarlijkheid (NL): Z(1) niet afbreekbare stoffen met gevaarlijke eigenschappen voor mens en milieu (carcinogeniteit/mutageniteit/ reprotoxiciteit/bioaccumulerend vermogen/ toxiciteit of persistentie)

· **15.2 Chemische veiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

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RUBRIEK 16: Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van produkteigenschappen en vestigen geen contractuele rechtsbetrekking.

· **Relevante zinnen**

- H301 Giftig bij inslikken.
- H311 Giftig bij contact met de huid.
- H314 Veroorzaakt ernstige brandwonden en oogletsel.
- H317 Kan een allergische huidreactie veroorzaken.
- H331 Giftig bij inademing.
- H341 Verdacht van het veroorzaken van genetische schade.
- H350 Kan kanker veroorzaken.

· **Afkortingen en acroniemen:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Acute Tox. 3: Acute toxiciteit – Categorie 3
- Acute Tox. 4: Acute toxiciteit – Categorie 4
- Skin Corr. 1B: Huidcorrosie/irritatie – Categorie 1B
- Eye Dam. 1: Ernstig oogletsel/oogirritatie – Categorie 1
- Skin Sens. 1: Sensibilisatie van de huid – Categorie 1
- Muta. 2: Mutageniteit in geslachtscellen – Categorie 2
- Carc. 1B: Kankerverwekkendheid – Categorie 1B
- STOT SE 3: Specifieke doelorgaantoxiciteit bij eenmalige blootstelling – Categorie 3

NL

Käyttöturvallisuustiedote

1907/2006/EY, 31 artikla mukainen

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Tarkistus: 30.10.2018

KOHTA 1: Aineen tai seoksen ja yhtiön tai yrityksen tunnistetiedot

- **1.1 Tuotetunniste**
- **Kauppanimike:** PARAFORMALDEHYDE 32% SOLUTION, EM GRADE
- **Artikkelinumero:** 15714, 15714-S, 15714-1L, 15714-SP
- **1.2 Aineen tai seoksen merkitykselliset tunnistetut käytöt ja käytöt, joita ei suositella**
Merkittäviä lisätietoja ei ole saatavilla.
- **Aineen / valmisteen käyttö** Laboratoriokemikaalit
- **1.3 Käyttöturvallisuustiedotteen toimittajan tiedot**
- **Valmistaja/toimittaja:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Tietoja antaa:** Product safety department
- **1.4 Häätöpuhelinnumero:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

KOHTA 2: Vaaran yksilöinti

- **2.1 Aineen tai seoksen luokitus**
- **Luokitus asetuksen (EY) N:o 1272/2008 mukaisesti**



GHS06 pääkallo ja ristikkäiset luut

Acute Tox. 3 H311 Myrkyllistä joutuessaan iholle.

Acute Tox. 3 H331 Myrkyllistä hengitettynä.



GHS08 terveysvaara

Muta. 2 H341 Epäillään aiheuttavan perimävaurioita.

Carc. 1B H350 Saattaa aiheuttaa syöpää.



GHS05 syöpyminen

Skin Corr. 1B H314 Voimakkaasti ihoa syövyttävää ja silmiä vaurioittavaa.

Eye Dam. 1 H318 Vaurioittaa vakavasti silmiä.



GHS07

Acute Tox. 4 H302 Haitallista nieltynä.

Skin Sens. 1 H317 Voi aiheuttaa allergisen ihoreaktion.

STOT SE 3 H335 Saattaa aiheuttaa hengitysteiden ärsytystä.

- **2.2 Merkinnät**

- **Merkinnät asetuksen (EY) N:o 1272/2008 mukaisesti** Tuote on luokiteltu ja merkitty CLP-asetuksen mukaan.

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(jatkuu sivulla 1)

· Varoitusmerkit


GHS05 GHS06 GHS08

· Huomiosana Vaara
· Vaaran määrävät komponentit etiketeissä:

formaldehydi

· Vaaralausekkeet

H302 Haitallista nieltynä.

H311+H331 Myrkyllistä joutuessaan iholle tai hengitettynä.

H314 Voimakkaasti ihoa syövyttävää ja silmiä vaurioittavaa.

H317 Voi aiheuttaa allergisen ihoreaktion.

H341 Epäillään aiheuttavan perimävaurioita.

H350 Saattaa aiheuttaa syöpää.

H335 Saattaa aiheuttaa hengitysteiden ärsytystä.

· Turvalausekkeet

P303+P361+P353 JOS KEMIKAALIA JOUTUU I HOLLE (tai hiuksiin): Riisu saastunut vaatetus välittömästi. Huuhdo/suihkuta iho vedellä.

P305+P351+P338 JOS KEMIKAALIA JOUTUU SILMIIN: Huuhdo huolellisesti vedellä usean minuutin ajan. Poista mahdolliset piilolinssit, jos sen voi tehdä helposti. Jatka huuhtomista.

P310 Ota välittömästi yhteys MYRKYTYSTIETOKESKUKSEEN/lääkäriin.

P321 Erityishoitoa tarvitaan (katso pakkauksen merkinnöissä).

P361+P364 Riisu saastunut vaatetus välittömästi ja pese ennen uudelleenkäyttöä.

P405 Varastoi lukitussa tilassa.

P501 Säilytä säiliö(t) noudattaen paikallisia/alueellisia/kansallisia/kansainvälisiä määräyksiä.

· 2.3 Muut vaarat
· PBT- ja vPvB-arvioinnin tulokset
· PBT: Ei voida käyttää.

· vPvB: Ei voida käyttää.

KOHTA 3: Koostumus ja tiedot aineosista

· 3.2 Kemialliset ominaisuudet: Seokset
· Selostus: Seuraavista aineista koostuva seos, jossa vaarattomia lisäaineita.

· Sisältää vaarallisia aineita:

CAS: 50-00-0	formaldehydi	>25- ≤50%
EINECS: 200-001-8	☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ Muta. 2, H341; Carc. 1B, H350; ☠ Skin Corr. 1B, H314; ☠ Skin Sens. 1, H317	

· Lisätietoja: Annettujen turvaohjeiden sanamuoto kappaleesta 16.

KOHTA 4: Ensiaputoimenpiteet

· 4.1 Ensiaputoimenpiteiden kuvaus
· Yleisohjeet:

Aineen saastuttamat vaatekappaleet on riisuttava välittömästi.

Myrkytysoireet voivat ilmaantua vasta useiden tuntien kuluttua. Tästä syystä henkilöt on pidettävä lääkärin tarkkailun alaisena ainakin 48 tuntia onnettomuuden jälkeen.

Hengityssuojain saadaan poistaa vasta kun saastuneet vaatteet on riisuttu.

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- Annettava tekohengitystä hengityksen ollessa epätasainen tai pysähtynyt.
- **Hengitettynä:**
Huolehdittava raittiin ilman saannista tai annettava happea; pyydettyä lääkärin apua.
Tajuton pidettävä ja kuljetettava kyljellään.
- **Ihokosketuksessa:** Pestävä heti vedellä ja saippualla ja huuhdottava hyvin.
- **Aineen päästyä silmiin:**
Silmiä huuhdotaan luomet auki juoksevan veden alla useita minutteja ja käännytään lääkärin puoleen.
- **Nieltyä:**
Saatettava lääkärin hoitoon.
Juotava runsaasti vettä ja huolehdittava raittiin ilman saannista. Käännyttävä välittömästi lääkärin puoleen.
- **4.2 Tärkeimmät oireet ja vaikutukset, sekä välittömät että viivästyneet Merkittäviä lisätietoja ei ole saatavilla.**
- **4.3 Mahdollisesti tarvittavaa välitöntä lääketieteellistä apua ja erityishoitoa koskevat ohjeet**
Merkittäviä lisätietoja ei ole saatavilla.

KOHTA 5: Palontorjuntatoimenpiteet

- **5.1 Sammutusaineet**
- **Sopivat sammutusaineet:**
CO₂, kuivakemikaalisammutin tai vesisuihku. Suuremmat palot torjutaan vesisuihulla tai alkoholeja kestäväällä vaahdolla.
- **5.2 Aineesta tai seoksesta johtuvat erityiset vaarat Merkittäviä lisätietoja ei ole saatavilla.**
- **5.3 Palontorjuntaa koskevat ohjeet**
- **Erityinen suojavarustus:** Käytettävä hengityssuojainta.

KOHTA 6: Toimenpiteet onnettomuuspäästöissä

- **6.1 Varotoimenpiteet, henkilönsuojaimet ja menettely hätätilanteessa**
Käytettävä suojavarustusta. Suojautumattomat henkilöt pidettävä loitolla.
- **6.2 Ympäristöön kohdistuvat varotoimet:**
Ohennettava runsaalla vedellä.
Estettävä pääsy viemäreihin/pintavesiin/pohjaveteen.
- **6.3 Suojarakenteita ja puhdistusta koskevat menetelmät ja -välineet:**
Imettävä nestettä sitovalla aineella (hiekkä, piimaa, hapon sidosaine, yleisidosaine, sahajauho).
Käytettävä neutralointiaineita.
Saastunut aine on jätteenä hävitettävä kohdan 13 mukaisesti.
Huolehdittava riittävästä tuuletuksesta.
- **6.4 Viittaukset muihin kohtiin**
Turvallista käsittelyä koskevia ohjeita kappaleessa 7.
Henkilökohtaista suojavarustusta koskevia ohjeita kappaleessa 8.
Aineen hävitystä koskevia ohjeita kappaleessa 13.

KOHTA 7: Käsittely ja varastointi

- **7.1 Turvallisen käsittelyn edellyttämät toimenpiteet**
Huolehdittava hyvästä tuuletuksesta/imusta työpaikalla.
Säiliöt avattava ja käsiteltävä varovasti.
Vältettävä aerosolin muodostusta.
- **Palo- ja räjähdysuojaohjeet:** Pidettävä hengityssuojain käyttövalmiina.
- **7.2 Turvallisen varastoinnin edellyttämät olosuhteet, mukaan luettuina yhteensopimattomuudet**
- **Varastointi:**
- **Varastotiloille ja säiliöille asetettavat vaatimukset:** Ei erikoisvaatimuksia.

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- **Yhteisvarastointiohjeet:** Ei tarvita.
- **Lisätietoja varastointiehtoihin:** Astiat on pidettävä tiiviisti suljettuina.
- **7.3 Erityinen loppukäyttö** Merkittäviä lisätietoja ei ole saatavilla.

KOHTA 8: Altistumisen ehkäiseminen ja henkilönsuojaimet

- **Lisäohjeita teknisten laitteiden varustukseen:** Ei muita tietoja, ks. kohta 7.

8.1 Valvontaa koskevat muuttajat

- **Aineosat työpaikkakohtaisin valvottavin raja-arvoin:**

50-00-0 formaldehydi

HTP	Pitkäaikaisarvo: 0,37 mg/m ³ , 0,3 ppm
	Kattoarvo: 1,2 mg/m ³ , 1 ppm

- **Lisäohjeet:** Tiedot perustuvat valmistushetkellä voimassaoleviin luetteloihin.

8.2 Altistumisen ehkäiseminen

Henkilökohtainen suojavarustus:

Yleiset suoja- ja hygieniatoimenpiteet:

Pidettävä loitolla elintarvikkeista, juomista ja rehuista.

Likaantuneet, aineen saastuttamat vaatekappaleet on riisuttava välittömästi.

Kädet on pestävä ennen taukoja ja työn päätyttyä.

Suojavaatetus on säilytettävä erikseen.

Vältettävä kosketusta silmiin.

Vältettävä ihokosketusta ja kosketusta silmiin.

Hengityssuoja:

Lyhytaikaisessa tai vähäisessä altistuksessa hengityssuojasuodin; intensiivisessä tai pitempiaikaisessa rasituksessa ulkoilmasta riippumaton hengityssuojain.

Käsisuojus:



Suojakäsineet

Käsinemateriaalin tulee olla tuotetta/ainetta/valmistetta kestävä ja läpäisemätöntä.

Puuttuvien testien vuoksi suositusta soveltuvasta suojakäsinemateriaalista tuotteelle/ valmisteelle / kemikaalisekoitteelle ei voida antaa.

Suojakäsinemateriaalin valinnassa on otettava huomioon läpäisyajat, läpäisevyyskerroin ja kuluminen.

Käsinemateriaali

Soveltuvan käsinetyypin valikoima ei riipu yksinomaan materiaalista vaan myös muista laatuominaisuuksista ja vaihtelee eri valmistajilla. Koska tuote on valmiste, joka koostuu eri aineista, ei suojakäsinemateriaalin kestävyys ole ennalta arvioitavissa vaan pitää tarkistaa ennen käyttöä.

Käsinemateriaalin läpäisy aika

Tarkka läpäisy aika on selvitettävä suojakäsinevalmistajalta ja sitä on noudatettava.

Silmäsuojus:



Tiiviit suojalasit

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(jatkuu sivulla 4)

KOHTA 9: Fysikaaliset ja kemialliset ominaisuudet

- **9.1 Fysikaalisia ja kemiallisia perusominaisuuksia koskevat tiedot**
- Yleiset ohjeet
- Olomuoto:
 - Muoto: Neste
 - Väri: Kirkas
- Haju: Tyypillinen
- Hajukynnys: Ei määrätty.
- pH-arvo 20 °C lämpötilassa: 2,8
- Tilanmuutos
 - Sulamis- tai jäätymispiste: Ei määrätty.
 - Kiehumispiste ja kiehumisalue: >93 °C
- Leimahduspiste: >60 °C
- Syttyvyys (kiinteät aineet, kaasut): Ei voida käyttää.
- Syttymislämpötila: 300 °C
- Hajoamislämpötila: Ei määrätty.
- Itsesyttymislämpötila: Tuote ei ole itsestään syttyvä.
- Räjähävyys: Ei määrätty.
- Räjähäysrajat:
 - Alempi: 7 Vol %
 - Ylempi: 73 Vol %
- Höyrypaine 20 °C lämpötilassa: 23 hPa
- Tiheys 20 °C lämpötilassa: 0,9392 g/cm³
- Suhteellinen tiheys: Ei määrätty.
- Höyryntiheys: Ei määrätty.
- Haihtumisnopeus: Ei määrätty.
- Liukenevuus/sekoittuvuus veteen: Täydellisesti sekoittuva.
- Jakautumiskerroin: n-oktanoli/vesi: Ei määrätty.
- Viskositeetti:
 - Dynaaminen: Ei määrätty.
 - Kinemaattinen: Ei määrätty.
- Liuotainepitoisuus:
 - Orgaaniset liuotaineet: 32,0 %
 - Vesi: 68,0 %
 - VOC (EY): 32,00 %
- Kinnainepitoisuus: 0,0 %
- 9.2 Muut tiedot: Merkittäviä lisätietoja ei ole saatavilla.

KOHTA 10: Stabiilisuus ja reaktiivisuus

- 10.1 Reaktiivisuus Merkittäviä lisätietoja ei ole saatavilla.
- 10.2 Kemiallinen stabiilisuus
- Termien hajoavuus / vältettävät olosuhteet: Ei hajaantumista määräystenmukaisessa käytössä.

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- **10.3 Vaarallisten reaktioiden mahdollisuus** Ei tiedossa vaarallisia reaktioita.
- **10.4 Vältettävät olosuhteet** Merkittäviä lisätietoja ei ole saatavilla.
- **10.5 Yhteensopimattomat materiaalit:** Merkittäviä lisätietoja ei ole saatavilla.
- **10.6 Vaaralliset hajoamistuotteet:** Tiedossa ei ole vaarallisia hajoamistuotteita.

KOHTA 11: Myrkyllisyyteen liittyvät tiedot

- **11.1 Tiedot myrkyllisistä vaikutuksista**
- **Välitön myrkyllisyys**
Haitallista nieltynä.
Myrkyllistä joutuessaan iholle tai hengitettynä.

- **Luokittelurelevantti LD/LC50-arvot:**

50-00-0 formaldehydi

Oraali LD50 >200 mg/kg (rat)

- **Ensisijainen ärsyttävä vaikutus:**
- **Ihosyövyttävyysohoärsytys**
Voimakkaasti ihoa syövyttävää ja silmiä vaurioittavaa.
- **Vakava silmävaurio/silmä-ärsytys**
Vaurioittaa vakavasti silmiä.
- **Hengitysteiden tai ihon herkistyminen**
Voi aiheuttaa allergisen ihoreaktion.
- **CMR-vaikutukset eli syöpää aiheuttavat, perimää vaurioittavat ja lisääntymiselle vaaralliset vaikutukset**
- **Sukusolujen perimää vaurioittavat vaikutukset**
Epäillään aiheuttavan perimävaurioita.
- **Syöpää aiheuttavat vaikutukset**
Saattaa aiheuttaa syöpää.
- **Lisääntymiselle vaaralliset vaikutukset** Saatavilla olevien tietojen perusteella luokituskriteerit eivät täyty.
- **Elinkohtainen myrkyllisyys – kerta-altistuminen**
Saattaa aiheuttaa hengitysteiden ärsytystä.
- **Elinkohtainen myrkyllisyys – toistuva altistuminen**
Saatavilla olevien tietojen perusteella luokituskriteerit eivät täyty.
- **Aspiraatiovaara** Saatavilla olevien tietojen perusteella luokituskriteerit eivät täyty.

KOHTA 12: Tiedot vaarallisuudesta ympäristölle

- **12.1 Myrkyllisyys**
- **Vesimyrkyllisyys:** Merkittäviä lisätietoja ei ole saatavilla.
- **12.2 Pysyvyys ja hajoavuus** Merkittäviä lisätietoja ei ole saatavilla.
- **12.3 Biokertyvyys** Merkittäviä lisätietoja ei ole saatavilla.
- **12.4 Lükkuvuus maaperässä** Merkittäviä lisätietoja ei ole saatavilla.
- **Ekologisia lisätietoja:**
- **Yleisohjeita:**
Vesistövaarallisuusluokka 2 (Oma luokitus): vesistöä vaarantava
Estetään pääsy pohjaveteen, vesistöihin, viemäristöön.
Ei saa päästää ohentamatta tai neutraloimatta viemäriin eikä vedenottoaltaaseen.
Juomavesi vaarantuu jo pienten määrien päästessä maaperään.
- **12.5 PBT- ja vPvB-arvioinnin tulokset**
- **PBT:** Ei voida käyttää.
- **vPvB:** Ei voida käyttää.

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· 12.6 Muut haitalliset vaikutukset Merkittäviä lisätietoja ei ole saatavilla.

KOHTA 13: Jätteiden käsittelyyn liittyvät näkökohdat

- 13.1 Jätteiden käsittelymenetelmät
- Suositus: Ei voida hävittää yhdessä talousjätteiden kanssa. Ei saa päästää viemäristöön.
- Puhdistamattomat pakkaukset:
- Suositus: Hävitettävä virallisten määräysten mukaisesti.
- Suositeltava puhdistusaine: Vesi, johon tarvittaessa lisätään puhdistusaineita.

KOHTA 14: Kuljetustiedot

- | | |
|--|---|
| · 14.1 YK-numero | |
| · ADR, IMDG, IATA | UN2209 |
| · 14.2 Kuljetuksessa käytettävä virallinen nimi | |
| · ADR | 2209 FORMALDEHYDILIUOS |
| · IMDG, IATA | FORMALDEHYDE SOLUTION |
| · 14.3 Kuljetuksen vaaraluokka | |
| · ADR, IMDG, IATA | |
|  | |
| · luokka | 8 Syövyttävät aineet |
| · Lipuke | 8 |
| · 14.4 Pakkausryhmä | |
| · ADR, IMDG, IATA | III |
| · 14.5 Ympäristövaarat: | Ei voida käyttää. |
| · 14.6 Erityiset varoimet käyttäjälle | Varoitus: Syövyttävät aineet |
| · Kemler-luku: | 80 |
| · EMS-numero: | F-A,S-B |
| · Stowage Category | A |
| · 14.7 Kuljetus irtolastina Marpol-sopimuksen II liitteen ja IBC-säännösten mukaisesti | Ei voida käyttää. |
| · Kuljetus/lisätietoja: | |
| · ADR | |
| · Rajoitetut määrät (LQ) | 5L |
| · Poikkeusmäärät (EQ) | Koodi: E1
Enimmäismäärä sisäpakkausta kohti: 30 ml
Enimmäismäärä ulkopakkausta kohti: 1000 ml |
| · Kuljetuskategoria | 3 |
| · Tunnelirajoituskoodi: | E |

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- | | |
|-----------------------------------|---|
| · IMDG | |
| · Limited quantities (LQ) | 5L |
| · Excepted quantities (EQ) | Code: E1 |
| | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 1000 ml |
| · UN "Model Regulation": | UN 2209 FORMALDEHYDILIUOS, 8, III |

KOHTA 15: Lainsäädäntöä koskevat tiedot

- **15.1 Nimenomaisesti ainetta tai seosta koskevat turvallisuus-, terveys- ja ympäristösäännökset tai -lainsäädäntö**
- **Direktiivi 2012/18/EU**
- **Nimetyt vaaralliset aineet - LIITE I** sisältäviä aineita ei ole lueteltu
- **Seveso-luokka H2 VÄLITÖN MYRKYLLISYYS**
- **Soveltamisen vähimmäismäärät (tonneina) alemman tason vaatimukset 50 t**
- **Soveltamisen vähimmäismäärät (tonneina) ylemmän tason vaatimukset 200 t**
- **NEUVOSTON ASETUS (EY) N:o 1907/2006 LIITE XVII Rajoitusehdot: 3, 28**
- **Kansalliset määräykset:**
- **Työskenteleyä rajoittavat huomautukset:**
Työntekijöitä ei saa alistaa tämän valmisteen sisältämille syöpää aiheuttaville vaarallisille aineille. Virastot voivat erikoistapauksessa antaa poikkeusluvan.
- **15.2 Kemikaaliturvallisuusarviointi:** Kemikaaliturvallisuusarviointia ei ole tehty.

KOHTA 16: Muut tiedot

Annetut tiedot perustuvat tähänhetkisiin tietoihimme. Ne eivät kuitenkaan anna takuuta tuotteen ominaisuuksista eivätkä aikaansaa sopimuksellista oikeussuhdetta.

- **Asiaankuuluvat lausekkeet**
H301 Myrkyllistä nieltynä.
H311 Myrkyllistä joutuessaan iholle.
H314 Voimakkaasti ihoa syövyttävää ja silmiä vaurioittavaa.
H317 Voi aiheuttaa allergisen ihoreaktion.
H331 Myrkyllistä hengitettynä.
H341 Epäillään aiheuttavan perimävaurioita.
H350 Saattaa aiheuttaa syöpää.
- **Lyhenteet ja lyhytnimet:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 3: Välitön myrkyllisyys – Katgoria 3
Acute Tox. 4: Välitön myrkyllisyys – Katgoria 4
Skin Corr. 1B: Ihosyövyttävyyssihoärstytys – Katgoria 1B
Eye Dam. 1: Vakava silmävaurio/silmä-ärstytys – Katgoria 1

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Kauppanimike: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE*Skin Sens. 1: Ihoa herkistävä – Katgoria 1**Muta. 2: Sukusolujen perimää vaurioittavat vaikutukset – Katgoria 2**Carc. 1B: Syöpää aiheuttavat vaikutukset – Katgoria 1B**STOT SE 3: Elinkohtainen myrkyllisyys (kerta-altistuminen) – Katgoria 3*

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RUBRIQUE 1: Identification de la substance/du mélange et de la société/l'entreprise

- **1.1 Identificateur de produit**
- **Nom du produit:** PARAFORMALDEHYDE 32% SOLUTION, EM GRADE
- **Code du produit:** 15714, 15714-S, 15714-1L, 15714-SP
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIQUE 2: Identification des dangers

- **2.1 Classification de la substance ou du mélange**
- **Classification selon le règlement (CE) n° 1272/2008**



GHS06 tête de mort sur deux tibias

Acute Tox. 3 H311 Toxique par contact cutané.

Acute Tox. 3 H331 Toxique par inhalation.



GHS08 danger pour la santé

Muta. 2 H341 Susceptible d'induire des anomalies génétiques.

Carc. 1B H350 Peut provoquer le cancer.



GHS05 corrosion

Skin Corr. 1B H314 Provoque des brûlures de la peau et des lésions oculaires graves.

Eye Dam. 1 H318 Provoque des lésions oculaires graves.



GHS07

Acute Tox. 4 H302 Nocif en cas d'ingestion.

Skin Sens. 1 H317 Peut provoquer une allergie cutanée.

STOT SE 3 H335 Peut irriter les voies respiratoires.

- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** Le produit est classifié et étiqueté selon le règlement CLP.

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· Pictogrammes de danger



GHS05 GHS06 GHS08

· Mention d'avertissement Danger

· Composants dangereux déterminants pour l'étiquetage:

Formaldéhyde

· Mentions de danger

H302 Nocif en cas d'ingestion.

H311+H331 Toxique par contact cutané ou par inhalation.

H314 Provoque des brûlures de la peau et des lésions oculaires graves.

H317 Peut provoquer une allergie cutanée.

H341 Susceptible d'induire des anomalies génétiques.

H350 Peut provoquer le cancer.

H335 Peut irriter les voies respiratoires.

· Conseils de prudence

P303+P361+P353 EN CAS DE CONTACT AVEC LA PEAU (ou les cheveux): Enlever immédiatement tous les vêtements contaminés. Rincer la peau à l'eau/Se doucher.

P305+P351+P338 EN CAS DE CONTACT AVEC LES YEUX: rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.

P310 Appeler immédiatement un CENTRE ANTIPOISON/un médecin.

P321 Traitement spécifique (voir sur cette étiquette).

P361+P364 Enlever immédiatement tous les vêtements contaminés et les laver avant réutilisation.

P405 Garder sous clef.

P501 Éliminer le contenu/récipient conformément à la réglementation locale/régionale/nationale/internationale.

· 2.3 Autres dangers

· Résultats des évaluations PBT et vPvB

· PBT: Non applicable.

· vPvB: Non applicable.

RUBRIQUE 3: Composition/informations sur les composants

· 3.2 Caractérisation chimique: Mélanges

· Description: Mélange des substances mentionnées à la suite avec des additifs non dangereux.

· Composants dangereux:

CAS: 50-00-0	Formaldéhyde	>25- ≤50%
EINECS: 200-001-8	Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Skin Corr. 1B, H314; Skin Sens. 1, H317	

· Indications complémentaires: Pour le libellé des phrases de risque citées, se référer au chapitre 16.

RUBRIQUE 4: Premiers secours

· 4.1 Description des premiers secours

· Remarques générales:

Enlever immédiatement les vêtements contaminés par le produit.

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Les symptômes d'intoxication peuvent apparaître après de nombreuses heures seulement; une surveillance médicale est donc nécessaire au moins 48 heures après un accident.

Ne retirer la protection respiratoire qu'après avoir retiré les vêtements contaminés.

Respiration artificielle dans le cas d'une respiration irrégulière ou d'un arrêt respiratoire.

· **Après inhalation:**

Donner de l'air frais ou de l'oxygène; demander d'urgence une assistance médicale.

En cas d'inconscience, coucher et transporter la personne en position latérale stable.

· **Après contact avec la peau:** Laver immédiatement à l'eau et au savon et bien rincer.

· **Après contact avec les yeux:**

Rincer les yeux, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières et consulter un médecin.

· **Après ingestion:**

Consulter immédiatement un médecin.

Boire de l'eau en abondance et donner de l'air frais. Consulter immédiatement un médecin.

· **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.

· **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**

Pas d'autres informations importantes disponibles.

RUBRIQUE 5: Mesures de lutte contre l'incendie

· **5.1 Moyens d'extinction**

· **Moyens d'extinction:**

CO₂, poudre d'extinction ou eau pulvérisée. Combattre les foyers importants avec de l'eau pulvérisée ou de la mousse résistant à l'alcool.

· **5.2 Dangers particuliers résultant de la substance ou du mélange**

Pas d'autres informations importantes disponibles.

· **5.3 Conseils aux pompiers**

· **Équipement spécial de sécurité:** Porter un appareil de protection respiratoire.

RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

· **6.1 Précautions individuelles, équipement de protection et procédures d'urgence**

Porter un équipement de sécurité. Eloigner les personnes non protégées.

· **6.2 Précautions pour la protection de l'environnement:**

Diluer avec beaucoup d'eau.

Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.

· **6.3 Méthodes et matériel de confinement et de nettoyage:**

Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).

Utiliser un neutralisant.

Evacuer les matériaux contaminés en tant que déchets conformément au point 13.

Assurer une aération suffisante.

· **6.4 Référence à d'autres rubriques**

Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.

Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.

Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

RUBRIQUE 7: Manipulation et stockage

· **7.1 Précautions à prendre pour une manipulation sans danger**

Veiller à une bonne ventilation/aspiration du poste de travail.

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- Ouvrir et manipuler les récipients avec précaution.*
- Eviter la formation d'aérosols.*
- **Préventions des incendies et des explosions:** Tenir des appareils de protection respiratoire prêts.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:** Tenir les emballages hermétiquement fermés.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

- **Indications complémentaires pour l'agencement des installations techniques:**
Sans autre indication, voir point 7.

- **8.1 Paramètres de contrôle**

- **Composants présentant des valeurs-seuil à surveiller par poste de travail:**

50-00-0 Formaldéhyde

VME	Valeur momentanée: 1 ppm
	Valeur à long terme: 0,5 ppm
	C1B, M2

- **Remarques supplémentaires:**
Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.
- **8.2 Contrôles de l'exposition**
- **Equipement de protection individuel:**
- **Mesures générales de protection et d'hygiène:**
Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.
Retirer immédiatement les vêtements souillés ou humectés.
Se laver les mains avant les pauses et en fin de travail.
Conserver à part les vêtements de protection.
Eviter tout contact avec les yeux.
Eviter tout contact avec les yeux et avec la peau.
- **Protection respiratoire:**
En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.
- **Protection des mains:**



Gants de protection

- **Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.**
À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.
Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.
- **Matériau des gants**
Le choix de gants appropriés dépend non seulement du matériau, mais aussi d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre. Puisque le produit représente une préparation composée de plusieurs substances, la résistance des matériaux des gants ne peut pas être calculée à l'avance et doit, alors, être contrôlée avant l'utilisation.
- **Temps de pénétration du matériau des gants**
Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.

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· **Protection des yeux:**



Lunettes de protection hermétiques

RUBRIQUE 9: Propriétés physiques et chimiques

· **9.1 Informations sur les propriétés physiques et chimiques essentielles**

· **Indications générales**

· **Aspect:**

· Forme:	Liquide
· Couleur:	Transparent
· Odeur:	Caractéristique
· Seuil olfactif:	Non déterminé.

· **valeur du pH à 20 °C:** 2,8

· **Changement d'état**

· Point de fusion/point de congélation:	Non déterminé.
· Point initial d'ébullition et intervalle d'ébullition:	>93 °C

· **Point d'éclair** >60 °C

· **Inflammabilité (solide, gaz):** Non applicable.

· **Température d'inflammation:** 300 °C

· **Température de décomposition:** Non déterminé.

· **Température d'auto-inflammabilité:** Le produit ne s'enflamme pas spontanément.

· **Propriétés explosives:** Non déterminé.

· **Limites d'explosion:**

· Inférieure:	7 Vol %
· Supérieure:	73 Vol %

· **Pression de vapeur à 20 °C:** 23 hPa

· **Densité à 20 °C:** 0,9392 g/cm³

· **Densité relative** Non déterminé.

· **Densité de vapeur:** Non déterminé.

· **Taux d'évaporation:** Non déterminé.

· **Solubilité dans/miscibilité avec l'eau:**

Entièrement miscible

· **Coefficient de partage: n-octanol/eau:** Non déterminé.

· **Viscosité:**

· Dynamique:	Non déterminé.
· Cinématique:	Non déterminé.

· **Teneur en solvants:**

· Solvants organiques:	32,0 %
· Eau:	68,0 %
· VOC (CE)	32,00 %

· **Teneur en substances solides:** 0,0 %

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· **9.2 Autres informations**

Pas d'autres informations importantes disponibles.

RUBRIQUE 10: Stabilité et réactivité

- **10.1 Réactivité** Pas d'autres informations importantes disponibles.
- **10.2 Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **10.3 Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **10.4 Conditions à éviter** Pas d'autres informations importantes disponibles.
- **10.5 Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **10.6 Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

RUBRIQUE 11: Informations toxicologiques

· **11.1 Informations sur les effets toxicologiques**

· **Toxicité aiguë**

Nocif en cas d'ingestion.

Toxique par contact cutané ou par inhalation.

· **Valeurs LD/LC50 déterminantes pour la classification:**

50-00-0 Formaldéhyde

Oral	LD50	>200 mg/kg (rat)
------	------	------------------

- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**
Provoque des brûlures de la peau et des lésions oculaires graves.
- **Lésions oculaires graves/irritation oculaire**
Provoque des lésions oculaires graves.
- **Sensibilisation respiratoire ou cutanée**
Peut provoquer une allergie cutanée.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagénicité sur les cellules germinales**
Susceptible d'induire des anomalies génétiques.
- **Cancérogénicité**
Peut provoquer le cancer.
- **Toxicité pour la reproduction**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition unique**
Peut irriter les voies respiratoires.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.

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- **Autres indications écologiques:**
- **Indications générales:**
Catégorie de pollution des eaux 2 (D) (Classification propre): polluant
Ne pas laisser pénétrer dans la nappe phréatique, les eaux ou les canalisations.
Ne doit pas pénétrer à l'état non dilué ou non neutralisé dans les eaux usées ou le collecteur.
Danger pour l'eau potable dès fuite d'une petite quantité dans le sous-sol.
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

RUBRIQUE 13: Considérations relatives à l'élimination

- **13.1 Méthodes de traitement des déchets**
- **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.
- **Emballages non nettoyés:**
- **Recommandation:** Evacuation conformément aux prescriptions légales.
- **Produit de nettoyage recommandé:** Eau, éventuellement avec des produits de nettoyage

RUBRIQUE 14: Informations relatives au transport

- | | |
|--|---------------------------------|
| · 14.1 Numéro ONU | UN2209 |
| · ADR, IMDG, IATA | |
| · 14.2 Désignation officielle de transport de l'ONU | |
| · ADR | 2209 FORMALDÉHYDE EN SOLUTION |
| · IMDG, IATA | FORMALDEHYDE SOLUTION |
| · 14.3 Classe(s) de danger pour le transport | |
| · ADR, IMDG, IATA | |
|  | |
| · Classe | 8 Matières corrosives. |
| · Étiquette | 8 |
| · 14.4 Groupe d'emballage | |
| · ADR, IMDG, IATA | III |
| · 14.5 Dangers pour l'environnement: | Non applicable. |
| · 14.6 Précautions particulières à prendre par l'utilisateur | Attention: Matières corrosives. |
| · Indice Kemler: | 80 |
| · No EMS: | F-A, S-B |
| · Stowage Category | A |
| · 14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC | Non applicable. |

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· Indications complémentaires de transport:

· ADR

- | | |
|----------------------------------|--|
| · Quantités limitées (LQ) | 5L |
| · Quantités exceptées (EQ) | Code: E1
Quantité maximale nette par emballage intérieur: 30 ml
Quantité maximale nette par emballage extérieur: 1000 ml |
| · Catégorie de transport | 3 |
| · Code de restriction en tunnels | E |

· IMDG

- | | |
|----------------------------|--|
| · Limited quantities (LQ) | 5L |
| · Excepted quantities (EQ) | Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml |

- | | |
|------------------------------|--|
| · "Règlement type" de l'ONU: | UN 2209 FORMALDÉHYDE EN SOLUTION, 8, III |
|------------------------------|--|

RUBRIQUE 15: Informations relatives à la réglementation

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
- Directive 2012/18/UE
- Substances dangereuses désignées - ANNEXE I Aucun des composants n'est compris.
- Catégorie SEVESO H2 TOXICITÉ AIGUË
- Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas 50 t
- Quantité seuil (tonnes) pour l'application des exigences relatives au seuil haut 200 t
- RÈGLEMENT (CE) N° 1907/2006 ANNEXE XVII Conditions de limitation: 3, 28
- Prescriptions nationales:
- Indications sur les restrictions de travail:
Le personnel ne doit pas être exposé aux substances dangereuses cancérigènes contenues dans cette préparation.
Les autorités peuvent autoriser des exceptions dans des cas particuliers.
- **15.2 Évaluation de la sécurité chimique:** Une évaluation de la sécurité chimique n'a pas été réalisée.

RUBRIQUE 16: Autres informations

Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.

· Phrases importantes

- H301 Toxique en cas d'ingestion.
- H311 Toxique par contact cutané.
- H314 Provoque des brûlures de la peau et des lésions oculaires graves.
- H317 Peut provoquer une allergie cutanée.
- H331 Toxique par inhalation.
- H341 Susceptible d'induire des anomalies génétiques.
- H350 Peut provoquer le cancer.

· Acronymes et abréviations:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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*EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 3: Toxicité aiguë – Catégorie 3**Acute Tox. 4: Toxicité aiguë – Catégorie 4**Skin Corr. 1B: Corrosion cutanée/irritation cutanée – Catégorie 1B**Eye Dam. 1: Lésions oculaires graves/irritation oculaire – Catégorie 1**Skin Sens. 1: Sensibilisation cutanée – Catégorie 1**Muta. 2: Mutagénicité sur les cellules germinales – Catégorie 2**Carc. 1B: Cancérogénicité – Catégorie 1B**STOT SE 3: Toxicité spécifique pour certains organes cibles (exposition unique) – Catégorie 3*

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ABSCHNITT 1: Bezeichnung des Stoffs beziehungsweise des Gemischs und des Unternehmens

- **1.1 Produktidentifikator**
- **Handelsname:** PARAFORMALDEHYDE 32% SOLUTION, EM GRADE
- **Artikelnummer:** 15714, 15714-S, 15714-1L, 15714-SP
- **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches** Laborchemikalien
- **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com

Science Services GmbH
Unterhachinger Str. 75
81737 München Germany

Tel: +49(0)89 18 93 668-0
safety@scienceservices.de

Deutschland: +49 (0)89 19240, 24h Giftnotruf Munchen, www.toxinfo.org
Osterreich: +43 1406 43 43, Gesundheit Osterreich GmbH, 24 h
- **Auskunftgebender Bereich:** Product safety department
- **1.4 Notrufnummer:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

ABSCHNITT 2: Mögliche Gefahren

- **2.1 Einstufung des Stoffs oder Gemischs**
- **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS06 Totenkopf mit gekreuzten Knochen

Acute Tox. 3 H311 Giftig bei Hautkontakt.

Acute Tox. 3 H331 Giftig bei Einatmen.



GHS08 Gesundheitsgefahr

Muta. 2 H341 Kann vermutlich genetische Defekte verursachen.

Carc. 1B H350 Kann Krebs erzeugen.



GHS05 Ätzwirkung

Skin Corr. 1B H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

Eye Dam. 1 H318 Verursacht schwere Augenschäden.

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GHS07

Acute Tox. 4 H302 Gesundheitsschädlich bei Verschlucken.
 Skin Sens. 1 H317 Kann allergische Hautreaktionen verursachen.
 STOT SE 3 H335 Kann die Atemwege reizen.

· 2.2 Kennzeichnungselemente

· Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008

Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

· Gefahrenpiktogramme



GHS05

GHS06

GHS08

· Signalwort Gefahr

· Gefahrbestimmende Komponenten zur Etikettierung:

Formaldehyd

· Gefahrenhinweise

H302 Gesundheitsschädlich bei Verschlucken.
 H311+H331 Giftig bei Hautkontakt oder Einatmen.
 H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.
 H317 Kann allergische Hautreaktionen verursachen.
 H341 Kann vermutlich genetische Defekte verursachen.
 H350 Kann Krebs erzeugen.
 H335 Kann die Atemwege reizen.

· Sicherheitshinweise

P303+P361+P353 BEI BERÜHRUNG MIT DER HAUT (oder dem Haar): Alle kontaminierten Kleidungsstücke sofort ausziehen. Haut mit Wasser abwaschen/duschen.
 P305+P351+P338 BEI KONTAKT MIT DEN AUGEN: Einige Minuten lang behutsam mit Wasser spülen. Eventuell vorhandene Kontaktlinsen nach Möglichkeit entfernen. Weiter spülen.
 P310 Sofort GIFTINFORMATIONSZENTRUM/Arzt anrufen.
 P321 Besondere Behandlung (siehe auf diesem Kennzeichnungsetikett).
 P361+P364 Alle kontaminierten Kleidungsstücke sofort ausziehen und vor erneutem Tragen waschen.
 P405 Unter Verschluss aufbewahren.
 P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.

· Zusätzliche Angaben:

Nur für gewerbliche Anwender.

· 2.3 Sonstige Gefahren

· Ergebnisse der PBT- und vPvB-Beurteilung

- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.

ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

· 3.2 Chemische Charakterisierung: Gemische

· **Beschreibung:** Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

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· Gefährliche Inhaltsstoffe:

CAS: 50-00-0 EINECS: 200-001-8	Formaldehyd Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Skin Corr. 1B, H314; Skin Sens. 1, H317	>25-≤50%
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· Zusätzliche Hinweise: Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

ABSCHNITT 4: Erste-Hilfe-Maßnahmen

· 4.1 Beschreibung der Erste-Hilfe-Maßnahmen
· Allgemeine Hinweise:

Mit Produkt verunreinigte Kleidungsstücke unverzüglich entfernen.

Vergiftungssymptome können erst nach vielen Stunden auftreten, deshalb ärztliche Überwachung mindestens 48 Stunden nach einem Unfall.

Atemschutz erst nach Entfernen verunreinigter Kleidungsstücke abnehmen.

Bei unregelmäßiger Atmung oder Atemstillstand künstliche Beatmung.

· Nach Einatmen:

Frischluf- oder Sauerstoffzufuhr; ärztliche Hilfe in Anspruch nehmen.

Bei Bewusstlosigkeit Lagerung und Transport in stabiler Seitenlage.

· Nach Hautkontakt: Sofort mit Wasser und Seife abwaschen und gut nachspülen.

· Nach Augenkontakt:

Augen bei geöffnetem Lidspalt mehrere Minuten unter fließendem Wasser abspülen und Arzt konsultieren.

· Nach Verschlucken:

Sofort Arzt aufsuchen.

Reichlich Wasser nachtrinken und Frischluftzufuhr. Unverzüglich Arzt hinzuziehen.

· 4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen

Keine weiteren relevanten Informationen verfügbar.

· 4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung

Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

· 5.1 Löschmittel
· Geeignete Löschmittel:

CO₂, Löschpulver oder Wassersprühstrahl. Größeren Brand mit Wassersprühstrahl oder alkoholbeständigem Schaum bekämpfen.

· 5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren

Keine weiteren relevanten Informationen verfügbar.

· 5.3 Hinweise für die Brandbekämpfung

· Besondere Schutzausrüstung: Atemschutzgerät anlegen.

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

· 6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren

Schutzausrüstung tragen. Ungeschützte Personen fernhalten.

· 6.2 Umweltschutzmaßnahmen:

Mit viel Wasser verdünnen.

Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.

· 6.3 Methoden und Material für Rückhaltung und Reinigung:

Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.

Neutralisationsmittel anwenden.

Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.

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- Für ausreichende Lüftung sorgen.
- **6.4 Verweis auf andere Abschnitte**
Informationen zur sicheren Handhabung siehe Abschnitt 7.
Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.
Informationen zur Entsorgung siehe Abschnitt 13.

ABSCHNITT 7: Handhabung und Lagerung

- **7.1 Schutzmaßnahmen zur sicheren Handhabung**
Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.
Behälter mit Vorsicht öffnen und handhaben.
Aerosolbildung vermeiden.
- **Hinweise zum Brand- und Explosionsschutz:** Atemschutzgeräte bereithalten.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:** Behälter dicht geschlossen halten.
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** -
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.

- **8.1 Zu überwachende Parameter**

- **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**

50-00-0 Formaldehyd

AGW	Langzeitwert: 0,37 mg/m ³ , 0,3 ml/m ³ 2(I);AGS, Sh, Y, X
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- **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.
- **8.2 Begrenzung und Überwachung der Exposition**
- **Persönliche Schutzausrüstung:**
- **Allgemeine Schutz- und Hygienemaßnahmen:**
Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.
Beschmutzte, getränkte Kleidung sofort ausziehen.
Vor den Pausen und bei Arbeitsende Hände waschen.
Getrennte Aufbewahrung der Schutzkleidung.
Berührung mit den Augen vermeiden.
Berührung mit den Augen und der Haut vermeiden.
- **Atemschutz:**
Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.
- **Handschutz:**



Schutzhandschuhe

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Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein. Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.

· **Handschuhmaterial**

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. Da das Produkt eine Zubereitung aus mehreren Stoffen darstellt, ist die Beständigkeit von Handschuhmaterialien nicht vorausberechenbar und muß deshalb vor dem Einsatz überprüft werden.

· **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

· **Augenschutz:**



Dichtschließende Schutzbrille

ABSCHNITT 9: Physikalische und chemische Eigenschaften

· **9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**

· **Allgemeine Angaben**

· **Aussehen:**

Form: Flüssigkeit

Farbe: Klar

· Geruch: Charakteristisch

· Geruchsschwelle: Nicht bestimmt.

· **pH-Wert bei 20 °C:** 2,8

· **Zustandsänderung**

Schmelzpunkt/Gefrierpunkt: Nicht bestimmt.

Siedebeginn und Siedebereich: >93 °C

· **Flammpunkt:** >60 °C

· **Entzündbarkeit (fest, gasförmig):** Nicht anwendbar.

· **Zündtemperatur:** 300 °C

· **Zersetzungstemperatur:** Nicht bestimmt.

· **Selbstentzündungstemperatur:** Das Produkt ist nicht selbstentzündlich.

· **Explosive Eigenschaften:** Nicht bestimmt.

· **Explosionsgrenzen:**

Untere: 7 Vol %

Obere: 73 Vol %

· **Dampfdruck bei 20 °C:** 23 hPa

· **Dichte bei 20 °C:** 0,9392 g/cm³

· **Relative Dichte** Nicht bestimmt.

· **Dampfdichte** Nicht bestimmt.

· **Verdampfungsgeschwindigkeit** Nicht bestimmt.

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· Löslichkeit in / Mischbarkeit mit Wasser:	Vollständig mischbar.
· Verteilungskoeffizient: n-Octanol/Wasser:	Nicht bestimmt.
· Viskosität:	
Dynamisch:	Nicht bestimmt.
Kinematisch:	Nicht bestimmt.
· Lösemittelgehalt:	
Organische Lösemittel:	32,0 %
Wasser:	68,0 %
VOC (EU)	32,00 %
· Festkörpergehalt:	0,0 %
· 9.2 Sonstige Angaben	Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 10: Stabilität und Reaktivität

- **10.1 Reaktivität** Keine weiteren relevanten Informationen verfügbar.
- **10.2 Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **10.3 Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **10.4 Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
 - **Akute Toxizität**
Gesundheitsschädlich bei Verschlucken.
Giftig bei Hautkontakt oder Einatmen.
- | | | |
|--|------|------------------|
| · Einstufungsrelevante LD/LC50-Werte: | | |
| 50-00-0 Formaldehyd | | |
| Oral | LD50 | >200 mg/kg (rat) |
- **Primäre Reizwirkung:**
 - **Ätz-/Reizwirkung auf die Haut**
Verursacht schwere Verätzungen der Haut und schwere Augenschäden.
 - **Schwere Augenschädigung/-reizung**
Verursacht schwere Augenschäden.
 - **Sensibilisierung der Atemwege/Haut**
Kann allergische Hautreaktionen verursachen.
 - **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
 - **Keimzell-Mutagenität**
Kann vermutlich genetische Defekte verursachen.
 - **Karzinogenität**
Kann Krebs erzeugen.
 - **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
 - **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**
Kann die Atemwege reizen.

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- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Aspirationsgefahr** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**
Wassergefährdungsklasse 2 (Selbsteinstufung): deutlich wassergefährdend
Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.
Darf nicht unverdünnt bzw. unneutralisiert ins Abwasser bzw. in den Vorfluter gelangen.
Trinkwassergefährdung bereits beim Auslaufen geringer Mengen in den Untergrund.
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.
- **Empfohlenes Reinigungsmittel:** Wasser, gegebenenfalls mit Zusatz von Reinigungsmitteln.

ABSCHNITT 14: Angaben zum Transport

- | | |
|---|---|
| <ul style="list-style-type: none"> · 14.1 UN-Nummer · ADR, IMDG, IATA | <p>UN2209</p> |
| <ul style="list-style-type: none"> · 14.2 Ordnungsgemäße UN-Versandbezeichnung · ADR · IMDG, IATA | <p>2209 FORMALDEHYDLÖSUNG
FORMALDEHYDE SOLUTION</p> |
| <ul style="list-style-type: none"> · 14.3 Transportgefahrenklassen · ADR, IMDG, IATA | <p>8 Ätzende Stoffe
8</p> |
| <ul style="list-style-type: none"> · 14.4 Verpackungsgruppe · ADR, IMDG, IATA | <p>III</p> |



- **Klasse** 8 Ätzende Stoffe
- **Gefahrzettel** 8

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· 14.5 Umweltgefahren:	Nicht anwendbar.
· 14.6 Besondere Vorsichtsmaßnahmen für den Verwender	Achtung: Ätzende Stoffe
· Kemler-Zahl:	80
· EMS-Nummer:	F-A,S-B
· Stowage Category	A
· 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code	Nicht anwendbar.
· Transport/weitere Angaben:	
· ADR	
· Begrenzte Menge (LQ)	5L
· Freigestellte Mengen (EQ)	Code: E1 Höchste Nettomenge je Innenverpackung: 30 ml Höchste Nettomenge je Außenverpackung: 1000 ml
· Beförderungskategorie	3
· Tunnelbeschränkungscode	E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 2209 FORMALDEHYDLÖSUNG, 8, III

ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
- **Richtlinie 2012/18/EU**
- **Namentlich aufgeführte gefährliche Stoffe - ANHANG I** Keiner der Inhaltsstoffe ist enthalten.
- **Seveso-Kategorie H2** AKUT TOXISCH
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse** 50 t
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse** 200 t
- **VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII** Beschränkungsbedingungen: 3, 28
- **Nationale Vorschriften:**
- **Hinweise zur Beschäftigungsbeschränkung:**
Arbeitnehmer dürfen den in dieser Zubereitung enthaltenen krebserzeugenden Gefahrstoffen nicht ausgesetzt sein. Im Einzelfall kann die Behörde Ausnahmen zulassen.
- **Technische Anleitung Luft:**

Klasse	Anteil in %
Wasser	68,0
I	32,0
- **Wassergefährdungsklasse:** WGK 2 (Selbsteinstufung): deutlich wassergefährdend.
- **Sonstige Vorschriften, Beschränkungen und Verbotsverordnungen**
Das Produkt unterliegt der Anlage 2 der Chemikalienverbotsverordnung (ChemVerbotsV) - Anforderungen in Bezug auf die Abgabe

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· **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

ABSCHNITT 16: Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

· **Relevante Sätze**

H301 Giftig bei Verschlucken.

H311 Giftig bei Hautkontakt.

H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

H317 Kann allergische Hautreaktionen verursachen.

H331 Giftig bei Einatmen.

H341 Kann vermutlich genetische Defekte verursachen.

H350 Kann Krebs erzeugen.

· **Abkürzungen und Akronyme:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Akute Toxizität – Kategorie 3

Acute Tox. 4: Akute Toxizität – Kategorie 4

Skin Corr. 1B: Hautreizende/-ätzende Wirkung – Kategorie 1B

Eye Dam. 1: Schwere Augenschädigung/Augenreizung – Kategorie 1

Skin Sens. 1: Sensibilisierung der Haut – Kategorie 1

Muta. 2: Keimzellmutagenität – Kategorie 2

Carc. 1B: Karzinogenität – Kategorie 1B

STOT SE 3: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 3

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SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

· **Articolo numero:** 15714, 15714-S, 15714-1L, 15714-SP

· **1.2 Usi identificati pertinenti della sostanza o della miscela e usi sconsigliati**
Non sono disponibili altre informazioni.

· **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio

· **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**

· **Produttore/fornitore:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkcck@aol.com

www.emsdiasum.com

Societa Italiana Chimici

Via Rio Nell Ellba 140

00138 Rome, Italy

Tel: 39 06 8800211

Fax: 39 30 06 8815313

Web: www.sichim.com

· **Informazioni fornite da:** Product safety department

· **1.4 Numero telefonico di emergenza:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SEZIONE 2: Identificazione dei pericoli

· **2.1 Classificazione della sostanza o della miscela**

· **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS06 teschio e tibie incrociate

Acute Tox. 3 H311 Tossico per contatto con la pelle.

Acute Tox. 3 H331 Tossico se inalato.



GHS08 pericolo per la salute

Muta. 2 H341 Sospettato di provocare alterazioni genetiche.

Carc. 1B H350 Può provocare il cancro.



GHS05 corrosione

Skin Corr. 1B H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

Eye Dam. 1 H318 Provoca gravi lesioni oculari.



GHS07

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Acute Tox. 4 H302 Nocivo se ingerito.

Skin Sens. 1 H317 Può provocare una reazione allergica cutanea.

STOT SE 3 H335 Può irritare le vie respiratorie.

· **2.2 Elementi dell'etichetta**

· **Etichettatura secondo il regolamento (CE) n. 1272/2008**

Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

· **Pittogrammi di pericolo**



GHS05 GHS06 GHS08

· **Avvertenza Pericolo**

· **Componenti pericolosi che ne determinano l'etichettatura:**
formaldeide

· **Indicazioni di pericolo**

H302 Nocivo se ingerito.

H311+H331 Tossico a contatto con la pelle o se inalato.

H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

H317 Può provocare una reazione allergica cutanea.

H341 Sospettato di provocare alterazioni genetiche.

H350 Può provocare il cancro.

H335 Può irritare le vie respiratorie.

· **Consigli di prudenza**

P303+P361+P353 **IN CASO DI CONTATTO CON LA PELLE (o con i capelli):** togliere immediatamente tutti gli indumenti contaminati. Sciacquare la pelle/fare una doccia.

P305+P351+P338 **IN CASO DI CONTATTO CON GLI OCCHI:** sciacquare accuratamente per parecchi minuti. Togliere le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare.

P310 Contattare immediatamente un CENTRO ANTIVELENI/un medico.

P321 Trattamento specifico (vedere su questa etichetta).

P361+P364 Togliere immediatamente tutti gli indumenti contaminati e lavarli prima di indossarli nuovamente.

P405 Conservare sotto chiave.

P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

· **2.3 Altri pericoli**

· **Risultati della valutazione PBT e vPvB**

· **PBT:** Non applicabile.

· **vPvB:** Non applicabile.

SEZIONE 3: Composizione/informazioni sugli ingredienti

· **3.2 Caratteristiche chimiche: Miscela**

· **Descrizione:** Miscela delle seguenti sostanze con additivi non pericolosi.

· **Sostanze pericolose:**

CAS: 50-00-0	formaldeide	>25-≤50%
EINECS: 200-001-8	Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Skin Corr. 1B, H314; Skin Sens. 1, H317	

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· **Ulteriori indicazioni:** Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16

SEZIONE 4: Misure di primo soccorso

· **4.1 Descrizione delle misure di primo soccorso**

· **Indicazioni generali:**

Allontanare immediatamente gli abiti contaminati dal prodotto.

I sintomi di avvelenamento possono comparire dopo molte ore, per tale motivo è necessaria la sorveglianza di un medico nelle 48 ore successive all'incidente.

Levarsi la maschera protettiva solamente dopo aver tolto gli abiti contaminati.

In caso di respirazione irregolare o di blocco respiratorio praticare la respirazione artificiale.

· **Inalazione:**

Portare il soggetto in zona ben areata o somministrare ossigeno; chiedere l'intervento di un medico.

Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.

· **Contatto con la pelle:** Lavare immediatamente con acqua e sapone sciacquando accuratamente.

· **Contatto con gli occhi:**

Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte e consultare il medico.

· **Ingestione:**

Chiamare subito il medico.

Bere abbondante acqua e sostare in zona ben areata. Richiedere immediatamente l'intervento del medico.

· **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.

· **4.3 Indicazione dell'eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**

Non sono disponibili altre informazioni.

SEZIONE 5: Misure antincendio

· **5.1 Mezzi di estinzione**

· **Mezzi di estinzione idonei:**

CO2, polvere o acqua nebulizzata. Estinguere gli incendi di grosse dimensioni con acqua nebulizzata o con schiuma resistente all'alcool.

· **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.

· **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**

· **Mezzi protettivi specifici:** Indossare il respiratore.

SEZIONE 6: Misure in caso di rilascio accidentale

· **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza**

Indossare equipaggiamento protettivo. Allontanare le persone non equipaggiate.

· **6.2 Precauzioni ambientali:**

Diluire abbondantemente con acqua.

Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.

· **6.3 Metodi e materiali per il contenimento e per la bonifica:**

Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).

Utilizzare mezzi di neutralizzazione.

Smaltimento del materiale contaminato conformemente al punto 13.

Provvedere ad una sufficiente areazione.

· **6.4 Riferimento ad altre sezioni**

Per informazioni relative ad un manipolazione sicura, vedere capitolo 7.

Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.

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Per informazioni relative allo smaltimento vedere Capitolo 13.

SEZIONE 7: Manipolazione e immagazzinamento

- **7.1 Precauzioni per la manipolazione sicura**
Accurata ventilazione/aspirazione nei luoghi di lavoro.
Aprire e manipolare i recipienti con cautela.
Evitare la formazione di aerosol.
- **Indicazioni in caso di incendio ed esplosione:** Tener pronto il respiratore.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Non sono richiesti requisiti particolari.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:** Mantenere i recipienti ermeticamente chiusi.
- **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

SEZIONE 8: Controllo dell'esposizione/protezione individuale

- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.

8.1 Parametri di controllo

- **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:**

50-00-0 formaldeide

TWA	Limite Ceiling: 0,37 mg/m ³ , 0,3 ppm sen, A2
-----	---

- **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.
- **8.2 Controlli dell'esposizione**
- **Mezzi protettivi individuali:**
- **Norme generali protettive e di igiene del lavoro:**
Tenere lontano da cibo, bevande e foraggi.
Togliere immediatamente gli abiti contaminati.
Lavarsi le mani prima dell'intervallo o a lavoro terminato.
Custodire separatamente l'equipaggiamento protettivo.
Evitare il contatto con gli occhi.
Evitare il contatto con gli occhi e la pelle.
- **Maschera protettiva:**
Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.
- **Guanti protettivi:**



Guanti protettivi

Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.
A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.
Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.

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· **Materiale dei guanti**

La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro. Poiché il prodotto rappresenta una formulazione di più sostanze, la stabilità dei materiali dei guanti non è calcolabile in anticipo e deve essere testata prima dell'impiego

· **Tempo di permeazione del materiale dei guanti**

Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.

· **Occhiali protettivi:**



Occhiali protettivi a tenuta

SEZIONE 9: Proprietà fisiche e chimiche

· **9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali**

· **Indicazioni generali**

· **Aspetto:**

Forma: Liquido

Colore: Chiaro

· **Odore:** Caratteristico

· **Soglia olfattiva:** Non definito.

· **valori di pH a 20 °C:** 2,8

· **Cambiamento di stato**

Punto di fusione/punto di congelamento: Non definito.

Punto di ebollizione iniziale e intervallo di ebollizione: >93 °C

· **Punto di infiammabilità:** >60 °C

· **Infiammabilità (solidi, gas):** Non applicabile.

· **Temperatura di accensione:** 300 °C

· **Temperatura di decomposizione:** Non definito.

· **Temperatura di autoaccensione:** Prodotto non autoinfiammabile.

· **Proprietà esplosive:** Non definito.

· **Limiti di infiammabilità:**

Inferiore: 7 Vol %

Superiore: 73 Vol %

· **Tensione di vapore a 20 °C:** 23 hPa

· **Densità a 20 °C:** 0,9392 g/cm³

· **Densità relativa:** Non definito.

· **Densità di vapore:** Non definito.

· **Velocità di evaporazione:** Non definito.

· **Solubilità in/Miscibilità con acqua:**

Completamente miscibile.

· **Coefficiente di ripartizione: n-ottanolo/acqua:** Non definito.

· **Viscosità:**

Dinamica: Non definito.

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Cinematica:	Non definito.
· Tenore del solvente:	
Solventi organici:	32,0 %
Acqua:	68,0 %
VOC (CE)	32,00 %
Contenuto solido:	0,0 %
· 9.2 Altre informazioni	Non sono disponibili altre informazioni.

SEZIONE 10: Stabilità e reattività

- **10.1 Reattività** Non sono disponibili altre informazioni.
- **10.2 Stabilità chimica**
- **Decomposizione termica/ condizioni da evitare:** Il prodotto non si decompone se utilizzato secondo le norme.
- **10.3 Possibilità di reazioni pericolose** Non sono note reazioni pericolose.
- **10.4 Condizioni da evitare** Non sono disponibili altre informazioni.
- **10.5 Materiali incompatibili:** Non sono disponibili altre informazioni.
- **10.6 Prodotti di decomposizione pericolosi:** Non sono noti prodotti di decomposizione pericolosi.

SEZIONE 11: Informazioni tossicologiche

· 11.1 Informazioni sugli effetti tossicologici

· Tossicità acuta

Nocivo se ingerito.

Tossico a contatto con la pelle o se inalato.

· Valori LD/LC50 rilevanti per la classificazione:

50-00-0 formaldeide

Orale | LD50 | >200 mg/kg (rat)

· Irritabilità primaria:

· Corrosione/irritazione cutanea

Provoca gravi ustioni cutanee e gravi lesioni oculari.

· Lesioni oculari gravi/irritazioni oculari gravi

Provoca gravi lesioni oculari.

· Sensibilizzazione respiratoria o cutanea

Può provocare una reazione allergica cutanea.

· Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)

· Mutagenicità delle cellule germinali

Sospettato di provocare alterazioni genetiche.

· Cancerogenicità

Può provocare il cancro.

· Tossicità per la riproduzione

Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· Tossicità specifica per organi bersaglio (STOT) - esposizione singola

Può irritare le vie respiratorie.

· Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta

Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

· Pericolo in caso di aspirazione

Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

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Scheda di dati di sicurezza
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SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**
Pericolosità per le acque classe 2 (D) (Autoclassificazione): pericoloso
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature.
Non immettere il prodotto non diluito o non neutralizzato nelle acque di scarico e nei canali di raccolta.
Pericolo per le acque potabili anche in caso di perdite nel sottosuolo di piccole quantità di prodotto.
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

SEZIONE 13: Considerazioni sullo smaltimento

- **13.1 Metodi di trattamento dei rifiuti**
- **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.
- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.
- **Detergente consigliato:** Acqua eventualmente con l'aggiunta di detersivi.

SEZIONE 14: Informazioni sul trasporto

- | | |
|---|-------------------------------|
| · 14.1 Numero ONU | |
| · ADR, IMDG, IATA | UN2209 |
| · 14.2 Nome di spedizione dell'ONU | |
| · ADR | 2209 FORMALDEIDE IN SOLUZIONE |
| · IMDG, IATA | FORMALDEHYDE SOLUTION |
| · 14.3 Classi di pericolo connesso al trasporto | |
| · ADR, IMDG, IATA | |
| | |
| · Classe | 8 Materie corrosive |
| · Etichetta | 8 |
| · 14.4 Gruppo di imballaggio | |
| · ADR, IMDG, IATA | III |
| · 14.5 Pericoli per l'ambiente: | Non applicabile. |
| · 14.6 Precauzioni speciali per gli utilizzatori | Attenzione: Materie corrosive |
| · Numero Kemler: | 80 |
| · Numero EMS: | F-A,S-B |

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· Stowage Category	A
· 14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC	Non applicabile.
· Trasporto/ulteriori indicazioni:	
· ADR	
· Quantità limitate (LQ)	5L
· Quantità esenti (EQ)	Codice: E1 Quantità massima netta per imballaggio interno: 30 ml Quantità massima netta per imballaggio esterno: 1000 ml
· Categoria di trasporto	3
· Codice di restrizione in galleria	E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 2209 FORMALDEIDE IN SOLUZIONE, 8, III

SEZIONE 15: Informazioni sulla regolamentazione

· **15.1 Disposizioni legislative e regolamentari su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**

· **Direttiva 2012/18/UE**

· **Sostanze pericolose specificate - ALLEGATO I** Nessuno dei componenti è contenuto.

· **Categoria Seveso H2 TOSSICITÀ ACUTA**

· **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore 50 t**

· **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore 200 t**

· **REGOLAMENTO (CE) n. 1907/2006 ALLEGATO XVII** Restrizioni: 3, 28

· **Disposizioni nazionali:**

· **Indicazioni relative alla limitazione delle attività lavorative:**

Il personale non deve essere esposto alle sostanze cancerogene contenute in questo preparato L'autorità può ammettere nei singoli casi delle eccezioni.

· **Istruzione tecnica aria:**

Classe	quota in %
NC	32,0

· **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

SEZIONE 16: Altre informazioni

I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.

· **Frasei rilevanti**

H301 Tossico se ingerito.

H311 Tossico per contatto con la pelle.

H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

H317 Può provocare una reazione allergica cutanea.

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H331 Tossico se inalato.

H341 Sospettato di provocare alterazioni genetiche.

H350 Può provocare il cancro.

· Abbreviazioni e acronimi:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Tossicità acuta – Categoria 3

Acute Tox. 4: Tossicità acuta – Categoria 4

Skin Corr. 1B: Corrosione/irritazione della pelle – Categoria 1B

Eye Dam. 1: Gravi lesioni oculari/irritazione oculare – Categoria 1

Skin Sens. 1: Sensibilizzazione della pelle – Categoria 1

Muta. 2: Mutagenicità sulle cellule germinali – Categoria 2

Carc. 1B: Cancerogenicità – Categoria 1B

STOT SE 3: Tossicità specifica per organi bersaglio (esposizione singola) – Categoria 3

IT

製品安全データシート

JIS Z7253 による分類

印刷日: 2018.10.30

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1 化学物質等及び会社情報

- ・製品識別子
- ・商品名: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE
- ・製品番号: 15714, 15714-S, 15714-1L, 15714-SP
- ・該当純物質または混合物の関連特定用途及び使用禁止用途 追加的な関連情報は得られていません。
- ・成分の利用/調合 実験用化学物質
- ・安全データシートの供給元の詳細情報
- ・製造者/納入者:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- ・その他の情報問い合わせ先: Product safety department
- ・緊急通報用電話番号:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 危険有害性の要約

・純物質または混合物の分類



頭蓋骨と大たい骨

急性毒性(経皮) 区分3

H311 皮膚に接触すると有毒

急性毒性(吸入) 区分3

H331 吸入すると有毒



健康に危険

生殖細胞変異原性 区分2

H341 遺伝性疾患のおそれの疑い

発がん性 区分1B

H350 発がんのおそれ



腐食

皮膚腐食性/刺激性 区分1B

H314 重篤な皮膚の薬傷及び目の損傷

重篤な目の損傷性/眼刺激性

区分1 H318 重篤な目の損傷



急性毒性(経口) 区分4

H302 飲み込むと有害

感作性(皮膚) 区分1

H317 アレルギー性皮膚反応を起こすおそれ

引火性液体 区分4

H227 可燃性液体

・ラベル要素

・GHS ラベル要素

本製品はGHS(化学品の分類および表示に関する世界調和システム)により分類及び表示されています。

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・ **危険図表**



GHS05 GHS06 GHS08

・ **表示語** 危険

・ **危険と定められた成分をラベル表示:**

ホルムアルデヒド

・ **危険文句**

- 可燃性液体
- 飲み込むと有害
- 皮膚に接触したり、吸入すると有毒
- 重篤な皮膚の薬傷及び眼の損傷
- アレルギー性皮膚反応を起こすおそれ
- 遺伝性疾患のおそれの疑い
- 発がんのおそれ

・ **注意文句**

- 皮膚（または髪）に付着した場合：直ちに汚染された衣類をすべて脱ぐこと。皮膚を流水 / シャワーで洗うこと。
- 眼に入った場合：水で数分間注意深く洗うこと。次にコンタクトレンズを着用していて容易に外せる場合は外すこと。その後も洗浄を続けること。
- ただちに毒物センター/医師に連絡すること。
- 特別な処置が必要である（このラベルのを見よ）。
- 汚染された衣類を直ちに全て脱ぎ、再使用する場合には洗濯をすること。
- 施錠して保管すること。
- 現地/地域/国/国際規定に従い内容物・容器の露出

・ **その他の危険性**

- ・ PBT（残留性、生物濃縮性、毒性物質）及び vPvB（高残留性、高生物濃縮性物質）アセスメント
- ・ PBT（残留性、生物濃縮性、毒性物質）：情報なし
- ・ vPvB（高残留性、高生物濃縮性物質）：情報なし

3 組成・成分情報

・ **化学的特性:** 混合物

・ **説明:** 危険のない混ぜ合わせかたをした以下成分からなる混合物

・ **危険な含有成分:**

50-00-0	ホルムアルデヒド ⚠ 急性毒性(経口) 区分3, H301; 急性毒性(経皮) 区分3, H311; 急性毒性(吸入) 区分3, H331; ⚠ 生殖細胞変異原性 区分2, H341; 発がん性 区分1B, H350; ⚠ 皮膚腐食性/刺激性 区分1B, H314; ⚠ 感作性(皮膚) 区分1, H317	>25-≤50%
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4 応急措置

・ **応急手当処置に関する説明**

・ **一般情報:**

- プロダクトの付着した衣類は速やかに脱ぐこと
- 中毒症状は時間がかなり経過した後に現れる場合もあるため、事故後最低 4 8 時間は医師の監視のもとで過ごすこと
- 呼吸防護マスクは汚染衣服を脱いだ後にはずすこと

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- 呼吸が不規則な場合あるいは呼吸停止の際には人工呼吸器を使用のこと
- ・**吸い込んだ場合:**
 - 外気もしくは酸素を送り込む、医師の助けを借りる
 - 意識不明の場合には安定させた状態で横向きに寝かせ、移送する
- ・**皮膚が触れた場合:** 即刻石鹼と水で洗い、よくすすぐ
- ・**眼に入った場合:** 眼を開けたまま、流水で何分間か眼をすすぎ、医師に相談する
- ・**飲み込んだ場合:**
 - 即医師を呼ぶ
 - 十分水を飲み、外気を吸う。速やかに医師を呼ぶ
- ・**医師への指示事項:**
- ・**最も重要な急性及び慢性の症状及び影響** 追加的な関連情報は得られていません。
- ・**何らかの即時医療処置及び特別治療の必要性を示す兆候** 追加的な関連情報は得られていません。

5 火災時の措置

- ・**消火剤**
- ・**適切な消火剤:**
 - CO₂, 消火粉末剤あるいは水放射。火が大きい場合には水放射もしくは耐アルコール性泡を使用
- ・**本化学物質または混合物から発生する特別な危険性** 追加的な関連情報は得られていません。
- ・**消防士向けアドバイス**
- ・**特別な保護装備:** 呼吸保護マスクを着用

6 漏出時の措置

- ・**個人的予防措置、保護具及び応急処置法** 防護服を着用。防護服を着用していない人は近づけない
- ・**環境関連予防措置:**
 - 大量の水で薄める
 - 下水処理施設、地上水あるいは地下水に達しないようにする
- ・**封じ込め及び浄化のための方法及び材料:**
 - 液体吸収材 (砂、珪藻土、酸結合剤、ユニバーサル結合剤、おがくず) で吸収する
 - 中和剤を使用
 - 13 項に下がい汚染材は廃棄物として処理する
 - 十分な換気を心がける
- ・**他のセクションへの言及**
 - 安全な取り扱い方に関しては 7 項を参照
 - 人の保護装備の情報に関しては 8 項を参照
 - 廃棄処分に 대해서는 13 項参照

7 取扱い・保管上の注意

- ・**取り扱い方:**
- ・**安全操作のための予防措置**
 - 作業場では十分な換気、埃を吸い取るよう心がける
 - 容器は十分に注意しながら開封し、取り扱う
 - エアゾールの発生を防ぐ
- ・**火災および爆発防止に関する注意事項:** 呼吸保護装置を用意しておく
- ・**混融危険性を含めた安全貯蔵条件**
- ・**保管:**
 - ・**保管スペースおよび容器に関する要求事項:** 特別な要求事項なし
 - ・**同じ場所に保管する際の注意事項:** 必要ない
 - ・**保管条件に関するその他の注意事項:** 容器は密閉した状態に保つ

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- ・ **特定の最終用途** 追加的な関連情報は得られていません。

8 暴露防止及び保護措置

- ・ **技術設備の形体に関する追加注意事項:** その他の申し立てなし、7項参照
- ・ **管理パラメーター**

- ・ **作業場において限界値の監視を要する成分:**

50-00-0 ホルムアルデヒド

OEL	長期値: 0.12 mg/m ³ , 0.1 ppm 最大許容濃度: 0.24 mg/m ³ , 0.2 ppm
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- ・ **追加注意事項:** 生成時に有効なリストがもとなっている
- ・ **暴露管理**
- ・ **人的保護装備:**
- ・ **一般防止措置および衛生措置:**
 - 食物、飲み物、飼料からは遠ざける
 - 汚れのしみ込んだ衣類は即刻脱ぐ
 - 休憩の前、作業終了後には手を洗う
 - 防護服は別に保管する
 - 眼に入らないように
 - 眼に入らないよう、また皮膚に接触しないよう注意する
- ・ **呼吸保護器具:**
 - 短時間もしくは負担が小さい場合には呼吸フィルター付装置を、集中的にあるいは長時間触れる場合には、酸素ポンプ付き呼吸保護装備を使用すること
- ・ **手の保護:**



保護手袋

手袋の材質は物質/材料/調剤に対して耐性であり、成分を通すことがあってはならない
テストをおこなっていないため、物質/調剤/化合物を取り扱う際の手袋の材質として勧められるもの
はない
浸透時間、透過性および劣化の点を留意しながら手袋の材質を選択する

手袋材

適当な手袋は材質だけではなく、その他の品質によっても変わり、各メーカーによって異なる。調合する際の物質は複数の成分から生成されるため、手袋材の耐久性は予想できない。このため使用前には必ずチェックしなければならない

- ・ **手袋材の浸透時間** 正確な浸透時間については保護手袋メーカーに問い合わせ、それを遵守すること
- ・ **眼の保護:**



密閉式保護めがね

JP

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9 物理的及び化学的性質

<ul style="list-style-type: none"> 基本的な物理及び化学特性に関する情報 一般指示事項 外観 <ul style="list-style-type: none"> 形: 液体 色: 透明 におい: 特徴的 嗅覚閾値: 決まっていない。 	
・pH-値 約 20 °C:	2.8
・状態の変化 <ul style="list-style-type: none"> 融点/融解範囲: 沸点/沸点範囲: 	決まっていない >93 °C
・引火点:	>60 °C
・発火性 (個体、気体):	情報なし
・発火温度:	300 °C
・分解温度:	決まっていない。
・自然発火性:	プロダクトは自然発火しない
・爆発の危険:	決まっていない。
・爆発限界: <ul style="list-style-type: none"> 下限: 上限: 	7 Vol % 73 Vol %
・蒸気圧 約 20 °C:	23 hPa
・密度 約 20 °C:	0.9392 g/cm ³
・相対的密度	決まっていない。
・蒸気密度	決まっていない。
・気化速度	決まっていない。
・以下成分における消和性/との混和性 <ul style="list-style-type: none"> 水: 	完全に混合できる
・分配係数 (n-オクタノール/水):	決まっていない。
・粘性: <ul style="list-style-type: none"> 力学的: 運動性: 	決まっていない。 決まっていない。
・溶剤含有量: <ul style="list-style-type: none"> 有機溶剤: 水: 	32.0 % 68.0 %
・固形物含有量:	0.0 %
・他の情報	追加的な関連情報は得られていません。

10 安定性及び反応性

- ・反応性 追加的な関連情報は得られていません。
- ・化学的安定性
- ・熱分解/回避すべき条件: 規定どおりの使用では分解しない
- ・危険反応の可能性 危険な反応は起きていない

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- ・避けるべき条件 追加的な関連情報は得られていません。
- ・不適合物質: 追加的な関連情報は得られていません。
- ・危険な分解生成物: 危険な分解プロダクトはない

11 有害性情報

- ・毒性学的影響に関する情報
- ・急性毒性:

- ・分類上の LD/LC50 値:

50-00-0 ホルムアルデヒド

□	LD50	>200 mg/kg (rat)
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- ・初期刺激作用:
- ・皮膚において: 皮膚と粘膜に強い刺激作用
- ・眼において: 強い刺激作用
重大な目の損傷の危険を伴う強い刺激作用
- ・感作作用: 皮膚接触によって感作作用の可能性あり
- ・毒性に関する補足注意事項:
調査に関する EU の最新の一般分類ガイドラインの計算によれば、プロダクトでは以下の危険が見込まれる
毒性が強い
毒性がある
腐食作用
刺激的
飲み込んだ場合、口内およびのどに強い刺すような痛み、同時に食道および胃に穿孔の危険
発ガン性
- ・次の種類の潜在的な効果に対する情報
- ・CMR-作用 (癌誘発、因子変異、そして進化危険作用)
生殖細胞変異原性 区分2, 発がん性 区分1B

12 環境影響情報

- ・毒性
- ・水生生物に対する毒性: 追加的な関連情報は得られていません。
- ・持続性及び分解性 追加的な関連情報は得られていません。
- ・環境システムにおける作用:
- ・生体内蓄積能 追加的な関連情報は得られていません。
- ・土壌内移動性 追加的な関連情報は得られていません。
- ・その他のエコロジーに関する注意事項:
- ・一般注意事項:
水への危険度分類 2 (ドイツの規定) (自己査定): 水に対する危険性あり
地下水、河川あるいは下水設備に流してはならない
希薄せずにあるいは中和せずに、廃水もしくは導水路に流してはならない
地下に少量流れ込んで飲料水を汚染する
- ・PBT (残留性、生物濃縮性、毒性物質) 及び vPvB (高残留性、高生物濃縮性物質) アセスメント
- ・PBT (残留性、生物濃縮性、毒性物質): 情報なし
- ・vPvB (高残留性、高生物濃縮性物質): 情報なし
- ・他の副作用 追加的な関連情報は得られていません。

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13 廃棄上の注意

- ・廃棄物処理方法
- ・勧告: 家庭ごみとはいっしょに処分できない。下水処理施設に流してはならない
- ・洗浄されていないパッケージ:
- ・勧告: 関係当局の規則に従って処分する
- ・推薦する洗剤: 水、場合に応じて洗剤も使って

14 輸送上の注意

・ UN 番号	
・ ADR, IMDG, IATA	UN2209
・ 国連出荷正式名	
・ ADR	2209 FORMALDEHYDE SOLUTION
・ IMDG, IATA	FORMALDEHYDE SOLUTION
・ 輸送の危険性クラス	
・ ADR, IMDG, IATA	
・ 分類	8 腐食性成分
・ 危険物ラベル	8
・ パッケージの分類	
・ ADR, IMDG, IATA	III
・ 環境危険:	情報なし
・ ユーザー用特別予防措置	警告: 腐食性成分
・ ケムラー符号:	80
・ EMS (電子メールサービスナンバー) 番号:	F-A,S-B
・ Stowage Category	A
・ マルポール条約 (MARPOL73/78) 付属書II及び IBCコードに準じたバルク輸送	情報なし
・ 輸送/その他の説明:	
・ ADR	
・ Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
・ IMDG	
・ Limited quantities (LQ)	5L
・ Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
・ UN "模範規制:	UN 2209 FORMALDEHYDE SOLUTION, 8, III

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15 適用法令

- ・ 該当純物質または混合物に対する安全、衛生及び環境規制・法律
- ・ 化審法

- ・ 既存化学物質

50-00-0	ホルムアルデヒド	2-482
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- ・ 特定化学物質

内容成分はリストアップされていない		
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- ・ 監視化学物質、旧第二種監視化学物質、旧第三種監視化学物質

50-00-0	ホルムアルデヒド	旧第二種監視化学物質
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- ・ 優先評価化学物質

50-00-0	ホルムアルデヒド	
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- ・ 白物質

内容成分はリストアップされていない		
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- ・ 既存化学物質安全性点検結果 (分解性・蓄積性)

50-00-0	ホルムアルデヒド	
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- ・ 既存化学物質安全性点検結果 (毒性)

内容成分はリストアップされていない		
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- ・ PRTR Class 1 designated substances
PRTR 制度 - 第一種指定化学物質

50-00-0	ホルムアルデヒド	411
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- ・ PRTR Class 2 designated substances
PRTR 制度 - 第二種指定化学物質

内容成分はリストアップされていない		
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- ・ Poisonous and Deleterious Substances Control Act - Deleterious Substances
毒物及び劇物取締法 - 劇物

50-00-0	ホルムアルデヒド	
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- ・ Poisonous and Deleterious Substances Control Act - Poisonous Substances
毒物及び劇物取締法 - 毒物

内容成分はリストアップされていない		
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- ・ Poisonous and Deleterious Substances Control Act - Specified Poisonous Substances
毒物及び劇物取締法 - 特定毒物

内容成分はリストアップされていない		
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- ・ 労働安全衛生法

- ・ 危険物

- ・ 爆発性の物 (施行令別表第 1 第 1 号)

内容成分はリストアップされていない		
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- ・ 発火性の物 (施行令別表第 1 第 2 号)

内容成分はリストアップされていない		
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- ・ 酸化性の物 (施行令別表第 1 第 3 号)

内容成分はリストアップされていない		
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- ・ 引火性の物 (施行令別表第 1 第 4 号)

内容成分はリストアップされていない		
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- ・ 可燃性のガス (施行令別表第 1 第 5 号)

内容成分はリストアップされていない		
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・特定化学物質等

・第一類物質

内容成分はリストアップされていない

・第二類物質

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・第三類物質

内容成分はリストアップされていない

・名称等を通知すべき有害物 (別表第9)

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・製造許可物質

内容成分はリストアップされていない

・鉛中毒予防規則 (施行令別表第4)

内容成分はリストアップされていない

・四アルキル鉛中毒予防規則 (施行令別表第5)

内容成分はリストアップされていない

・有機溶剤中毒予防規則第 (施行令別表第6の2)

・第一種有機溶剤等

内容成分はリストアップされていない

・第二種有機溶剤等

内容成分はリストアップされていない

・第三種有機溶剤等

内容成分はリストアップされていない

・強い変異原性が認められた化学物質

内容成分はリストアップされていない

・GHS ラベル要素

本製品はGHS(化学品の分類および表示に関する世界調和システム)により分類及び表示されています。

・危険図表



GHS05 GHS06 GHS08

・表示語 危険

・危険と定められた成分をラベル表示:

ホルムアルデヒド

・危険文句

可燃性液体

飲み込むと有害

皮膚に接触したり, 吸入すると有毒

重篤な皮膚の薬傷及び眼の損傷

アレルギー性皮膚反応を起こすおそれ

遺伝性疾患のおそれの疑い

発がんのおそれ

・注意文句

皮膚 (または髪) に付着した場合: 直ちに汚染された衣類をすべて脱ぐこと。皮膚を流水 / シャワーで洗うこと。

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眼に入った場合：水で数分間注意深く洗うこと。次にコンタクトレンズを着用していて容易に外せる場合は外すこと。その後も洗浄を続けること。
 ただちに毒物センター/医師に連絡すること。
 特別な処置が必要である（このラベルのを見よ）。
 汚染された衣類を直ちに全て脱ぎ、再使用する場合には洗濯をすること。
 施錠して保管すること。
 現地/地域/国/国際規定に従い内容物・容器の露出

・ **国内規定:**

・ **使用上の制約に関する注意事項:**

被用者はこの調合に含まれる発ガン性危険成分に暴露されてはならない。ただし、場合に依じて関係当局が例外許可をおろすこともある

・ **化学物質の安全性評価:** 化学物質安全性評価が遂行されていない

16 その他の情報

この情報は現在の我々の認識に基づいている。ただし、プロダクトの特性を保証するものではなく、また契約において法的根拠にはならない

・ **縮約と二文字語:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

PRTR/化管法: 化学物質排出把握管理促進法

引火性液体 区分4: Flammable liquids – Category 4

急性毒性(経口) 区分3: Acute toxicity – Category 3

急性毒性(経口) 区分4: Acute toxicity – Category 4

皮膚腐食性/刺激性 区分1B: Skin corrosion/irritation – Category 1B

重篤な眼の損傷性/眼刺激性 区分1: Serious eye damage/eye irritation – Category 1

感作性(皮膚) 区分1: Skin sensitisation – Category 1

生殖細胞変異原性 区分2: Germ cell mutagenicity – Category 2

発がん性 区分1B: Carcinogenicity – Category 1B

물질안전보건자료

GHS에 따라

기압점: 2018.10.30

개정: 2018.10.30

1 화학제품과 회사에 관한 정보

- 제품 식별자
- 제품명: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE
- 상품번호: 15714, 15714-S, 15714-1L, 15714-SP
- 해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도 추가적인 정보가 존재하지 않습니다.
- 제품의 권고 용도와 사용상의 제한: 실험실화학품
- 안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보
- 제조자/수입자/유통업자 정보:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- Samchang Commercial Co., Ltd.
Yeo Eui Do
PO Box 1110
Seoul, Korea
Tel: 82 2 703 3040
Fax: 82 2 717 3298
-
- Daedok Science, Co. Ltd.
34141 E10 Korea Advanced Institute of Science
Guseong-Dong, Yuseong-gu, Daejeon,
Korea
Phone: 82 42 710 2091
Fax: 82 42 367 0005
Website: www.labsmro.com
- 추가적인 정보 획득 가능: Product safety department
- 비상연락 전화번호:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 유해성·위험성

- 순물질 또는 혼합물의 분류



두개골과 대퇴골

급성 독성 - 경피 - 구분 3

H311 피부와 접촉하면 유독함

급성 독성 - 흡입 - 구분 3

H331 흡입하면 유독함



건강에 위험

생식세포 변이원성 - 구분 2

H341 유전적인 결함을 일으킬 것으로 의심됨

발암성 - 구분 1B

H350 암을 일으킬 수 있음



부식

(2 쪽에 계속)

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물질안전보건자료

GHS에 따라

기압점: 2018.10.30

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제품명: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(1 쪽부터계속)

피부 부식성/피부 자극성 - 구분 1 H314 피부에 심한 화상과 눈 손상을 일으킴
 심한 눈 손상성/눈 자극성 - 구분 1 H318 눈에 심한 손상을 일으킴



급성 독성 - 경구 - 구분 4 H302 삼키면 유해함
 피부 과민성 - 구분 1 H317 알레르기성 피부 반응을 일으킬 수 있음

- 라벨표기 요소
- GHS 라벨 요소
- 본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
- 그림문자



GHS05 GHS06 GHS08

- 신호어 위험
- **상표상에명확히위험성이표시된성분:**
 포르말린
- **유해.위험 문구**
 삼키면 유해함
 피부에 접촉하거나 흡입하면 유독함.
 피부에 심한 화상과 눈 손상을 일으킴
 알레르기성 피부 반응을 일으킬 수 있음
 유전적인 결함을 일으킬 것으로 의심됨
 암을 일으킬 수 있음
- **예방조치 문구**
 피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗으시오. 피부를 물로 씻으시오/샤워하시오.
 눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하시오. 계속 씻으시오.
 즉시 독성물질센터/병원 연락 필요.
 (라벨 참조) 처치를 하시오.
 오염된 모든 의복은 즉시 벗고 다시 사용 전 세척하시오.
 잠금장치가 있는 저장장소에 저장하시오.
 현지/지역/국가/국제 규정에 따라서 내용물/용기 노출
- 기타 유해성
- PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.

3 구성성분의 명칭 및 함유량

- **화학적 특성:** 혼합물
- **설명:** 무해한 첨가물이 함유된 아래에 열거된 물질로 만들어진 혼합물.

· 위험요소:

50-00-0	포르말린	>25-≤50%
	⚠ 급성 독성 - 경구 - 구분 3, H301; 급성 독성 - 경피 - 구분 3, H311; 급성 독성 - 흡입 - 구분 3, H331; ⚠ 생식세포 변이원성 - 구분 2, H341; 발암성 - 구분 1B, H350; ⚠ 피부 부식성/피부 자극성 - 구분 1, H314; ⚠ 피부 과민성 - 구분 1, H317	

KR

(3 쪽에계속)

물질안전보건자료

GHS에 따라

기압점: 2018.10.30

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(2 쪽부터계속)

4 응급조치 요령

· 응급조치요령 내용

· 일반적 정보:

이제품에 의해 오염된 의상은 즉시 제거한다.

중독 증상은 몇 시간이 지난 뒤에 발생할 수 있다. 따라서 사고가 발생한 후에 적어도 48 시간동안은 의료진의 관찰을 받아야 한다.

반드시 오염된 의상을 완전히 제거한 후에 호흡보호기를 떼어낸다.

불규칙적인 호흡이나 호흡정지상태에서는 인공호흡을 실시한다.

· 흡입했을 때:

신선한 공기나 산소를 공급받고, 의료진의 도움을 구한다.

환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.

· 피부에 접촉했을 때: 즉시 물과 비누로 씻고 잘 행군다.

· 눈에 들어갔을 때: 흐르는 물에 눈을 몇분동안 씻어내고 나서, 의사와 상담한다

· 먹었을 때:

즉시 의사의 도움을 구한다.

물을 충분히 마시고 신선한 공기를 쐬다. 즉시 의사의 도움을 구한다.

· 기타 의사의 주의사항:

· 가장 중요한 급·만성 증상 및 영향 추가적인 정보가 존재하지 않습니다.

· 즉각적인 의료처치 및 특별치료가 필요함을 시사하는 징후 추가적인 정보가 존재하지 않습니다.

5 폭발·화재시 대처방법

· 소화제

· 적절한 소화제:

이산화탄소, 진화용 석회가루 또는 물방사를 사용하고, 더 큰 화재는 물을 분사하거나 알코올이 함유된 거품으로 끈다.

· 본 화학물질이나 혼합물에서 발생하는 특별 유해성 추가적인 정보가 존재하지 않습니다.

· 소방관에 대한 권고사항

· 화재 진압 시 착용할 보호구 및 예방조치: 호흡보호장비설치.

6 누출 사고 시 대처방법

· 개인적 예방조치, 보호장비 및 응급처치 절차 안전장비 착용하고, 무방비의 사람은 격리시킨다.

· 환경 관련 예방조치:

많은 물로 희석시킨다.

하수도망/해수면위의물/지하수로도달하지않게한다.

· 밀폐 및 정화 방법과 소재:

액체가 혼합된 물질(모래, 규조토, 산성결합물, 일반결합물, 톱밥)에 흡입되도록 한다.

중성제를 사용한다.

항목 13에 따라 오염된 물질을 쓰레기로 처분한다.

충분한 환기가 되도록 한다.

· 타 섹션 참조

안전관리에 대한 정보는 제7장을 참고하십시오.

개인보호장비에 대한 정보는 제8장을 참고하십시오.

쓰레기처리에 대한 정보는 제13장을 참고하십시오.

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7 취급 및 저장방법

- 취급:
 - 안전 취급을 위한 예방조치
작업장에서는통풍이잘되고/습기제거가잘 되게주의한다.
조심스럽게용기를 개봉하거나취급한다.
연무질이형성되는것을피한다.
 - 화재 및 폭발 사고 예방대책에 관한 정보: 호흡보호장비를항상비치한다.
- 혼합위험성 등 안전 저장 조건
- 보관:
 - 안전한 저장 방법: 특 별 한 요구사항이 없음.
 - 하나의 공동 보관 시설에 대한 보관 관련 정보: 필 요없음
 - 보관 조 건 에 관 한 추 가 적 인 정 보: 용기를새지않게밀폐한채보관한다.
 - 구체적 최종 사용자 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

- 첨단시설 디자인에 대한 추가정보: 더 이 상 의 자료는 없음. 항 목 7 을 참고하시 오.
- 통제 변수

· 화학물질의 노출기준, 생물학적 노출기준 등:

50-00-0 포르말린

TLV (KR)	장기간의값: 0.3 ppm 발암성1A, 생식세포 변이원성2
PEL (US)	단기간의값: 2 ppm 장기간의값: 0.75 ppm see 29 CFR 1910.1048(c)
REL (US)	장기간의값: 0.016 ppm 최고노출기준: 0.1* ppm *15-min; See Pocket Guide App. A
TLV (US)	단기간의값: 0.37 mg/m ³ , 0.3 ppm 장기간의값: 0.12 mg/m ³ , 0.1 ppm DSEN; RSEN

· 추 가 정 보: 제 조 할 당 시 에 유 효 한 목 록 을 기 초 로 사 용 했 다.

- 노출 통제
- 개인 보호구
- 일반적보호조치및위생조치:
 - 식료품, 음료수와 사료로부터 멀리떨어뜨려 놓는다.
 - 더러워지거나음료수가물은즉시탈의한다.
 - 휴식전 이 나 작업이 끝날때마다 손을 씻는다.
 - 방호복은따로보관한다.
 - 눈과의접촉을피한다.
 - 눈과피부와와의접촉은피한다.
- 호흡기 보호:
 - 단 시간 또는 경 미 한 오 염 의 경 우 에 는 호 흡 여 과 기 를 사 용 한 다. 심 각 한 또는 장 기 간 노 출 시 에 는 호 흡 보 호 장 비 를 사 용 한 다.

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· 손 보호:



보호용 장갑

장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.
테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합 물에 적합한 장갑재질에 대한 추천이 없다.
투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· 장갑 의재료

적합한장갑의선정은재질차이뿐만아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도다르게선정되어야한다. 제품은다양한재료로부터의조제로이루어지는것이기때문에, 장갑재질의안정성은사전에예측되어질수있는것이아니고, 반드시사용전에 (그안전성이) 체크되어야한다.

· 장갑 재료 의 투과 시간 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

· 눈 보호:



확조이는보안경

9 물리화학적 특성

· 기본 물리 및 화학적 특성에 대한 정보

· 일반정보

· 외형

· 물리적 상태:	액체
· 색:	밝은
· 냄새:	특색있는
· 후각역치	알맞지않다.

· pH 의경우 20 °C: 2.8

· 상태변화

· 녹는점/어는점:	맞지않는
· 초기 끓는점과 끓는점 범위:	>93 °C

· 인화점: >60 °C

· 인화성(고체, 기체): 해당사항 없음.

· 점화온도: 300 °C

· 분해 온도: 알맞지않다.

· 자기점화: 이제품은자연발화성이없다.

· 폭발위험: 알맞지않다.

· 인화 또는 폭발 범위의 상한/하한

· 아래로:	7 Vol %
· 위로:	73 Vol %

· 증기압 의경우 20 °C: 23 hPa

· 밀도 의경우 20 °C: 0.9392 g/cm³

· 비중: 알맞지않다.

· 증기밀도: 알맞지않다.

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· 증발 속도:	알맞지않다.
· 용해도:	
· 물:	완전히혼합할수있는
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도:	
· 역학성:	알맞지않다.
· 등점성:	알맞지않다.
· 용매내용물	
· 유기용매:	32.0 %
· 물:	68.0 %
· VOC (EU)	32.00 %
· 고체의 함량:	0.0 %
· 기타 정보	추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

- **반응성** 추가적인 정보가 존재하지 않습니다.
- **화학적 안정성**
- **화학적 안정성 및 유해 반응의 가능성 / 피해야 할 조건:** 규정에따라사용할경우해체는없다
- **유해반응 가능성** 위험한반응으로는알려지지않았다.
- **피해야 할 조건** 추가적인 정보가 존재하지 않습니다.
- **혼합 금지 물질:** 추가적인 정보가 존재하지 않습니다.
- **유해분해물질:** 위험성있는분해물들은알려지지않았다.

11 독성에 관한 정보

- **독성학적 영향에 대한 정보**
- **급성 독성:**

· LD/LC50-수치에 따른 분류:
50-00-0 포르말린
구간의 LD50 >200 mg/kg (rat)

- **일차적 자극 효과:**
- **피부 부식성 또는 자극성:** 피부와점막에강한부식작용.
- **심한 눈 손상 또는 자극성:**
강한부식작용
심각한안구상처의위험이있는강한자극
- **감각화:** 피부접촉을통하여감각화가가능성있다.
- **추 가 적 인 독성 에 관 한 정보:**
이제품은유럽공동체의공동분류원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전준비에대하여제시하고있다.
독성의
건강에해로운
부식작용의
자극적인
삼킬경우식도나위등의내장기관벽에상처를주는위험과마찬가지로입주변이나구강에강한부식작용을한다
암을유발하는

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- 다음 종류의 잠재적인 효과에 대한 정보
- CMR-효과 (암 유발, 돌연변이성 그리고 생식 독성)
생식세포 변이원성 - 구분 2, 발암성 - 구분 1B


12 환경에 미치는 영향

- **독성**
- **수생독성:** 추가적인 정보가 존재하지 않습니다.
- **지속성 및 분해성** 추가적인 정보가 존재하지 않습니다.
- **환경 시스템에서의 행동:**
- **생물농축 잠재성** 추가적인 정보가 존재하지 않습니다.
- **토양내 이동성** 추가적인 정보가 존재하지 않습니다.
- **추가적인 생태학 정보:**
- **일반 특징:**
수질오염등급 2 (자체등급분류): 수질오염이된 지하수나, 하천으로또는 하수도망에도달하지않게한다.
희석시키지않은채또는중화시키지않은채 하수도나배수로에도달하지않게해야한다.
지하수로경미한양이유입되었을경우엔이미식수오염상태이다
- **PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과**
- **PBT(잔류성, 생물농축성, 독성 물질):** 해당사항 없음.
- **vPvB(고 잔류성, 고 생물농축성 물질):** 해당사항 없음.
- **기타 부작용** 추가적인 정보가 존재하지 않습니다.

13 폐기시 주의사항

- **폐기물 처리 방법**
- **권고:** 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- **비위생적 포장:**
- **권고:** 당국의지침에입각한쓰레기처리.
- **추천 세정제:** 경우에따라서세제가첨가된물

14 운송에 필요한 정보

<ul style="list-style-type: none"> · 유엔 번호 · ADR, IMDG, IATA 	<p>UN2209</p>
<ul style="list-style-type: none"> · UN 적정 선적명 · ADR · IMDG, IATA 	<p>2209 FORMALDEHYDE SOLUTION FORMALDEHYDE SOLUTION</p>
<ul style="list-style-type: none"> · 교통 위험 클래스 · ADR, IMDG, IATA 	
	
<ul style="list-style-type: none"> · 등급 · 위험물 라벨 	<p>8 부식작용하는물질 8</p>

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<ul style="list-style-type: none"> · 용기등급 · ADR, IMDG, IATA 	<p style="text-align: center;">III</p>
<ul style="list-style-type: none"> · 환경적 유해물질: 	<p>해당사항 없음.</p>
<ul style="list-style-type: none"> · 이용자 특별 예방조치 · 위험 코드: · EMS-번호: · Stowage Category 	<p>경고: 부식작용하는물질 80 F-A,S-B A</p>
<ul style="list-style-type: none"> · MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송 	<p>해당사항 없음.</p>
· 운 송/추가 정보:	
<ul style="list-style-type: none"> · ADR · 한정 수량 (LQ) · Excepted quantities (EQ) 	<p>5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml</p>
<ul style="list-style-type: none"> · 운송 구분 · 터널 제한 코드 	<p>3 E</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml</p>
<ul style="list-style-type: none"> · UN "모범 규제": 	<p>UN 2209 FORMALDEHYDE SOLUTION, 8, III</p>

15 법적 규제현황

· 산업안전보건법에 의한 규제:		
· 제조 등 금지물질:	어떠한내용물도 목록화되어있지않다	
· 허가대상물질:	어떠한내용물도 목록화되어있지않다	
· 관리대상유해물질:	50-00-0 포르말린	
· 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률		
· Korean Existing Chemical Inventory		
50-00-0	포르말린	KE-17074
7732-18-5	Deionized Water, Reagent Grade A.C.S.	KE-35400
· 화학물질관리법		
· 사고대비물질		
50-00-0	포르말린	
· 금지물질		
어떠한내용물도 목록화되어있지않다		

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· 제한물질	
50-00-0	포르말린
· 유독물질	
50-00-0	포르말린
· 허가물질	
50-00-0	포르말린

- **GHS 라벨 요소**
본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
- **그림문자**



- **신호어 위험**
- **상표상에명확히위험성이표시된성분:**
포르말린
- **유해.위험 문구**
삼키면 유해함
피부에 접촉하거나 흡입하면 유독함.
피부에 심한 화상과 눈 손상을 일으킴
알레르기성 피부 반응을 일으킬 수 있음
유전적인 결함을 일으킬 것으로 의심됨
암을 일으킬 수 있음
- **예방조치 문구**
피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗으시오. 피부를 물로 씻으시오/샤워하시오.
눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하시오. 계속 씻으시오.
즉시 독성물질센터/병원 연락 필요.
(라벨 참조) 처치를 하시오.
오염된 모든 의복은 즉시 벗고 다시 사용 전 세척하시오.
잠금장치가 있는 저장장소에 저장하시오.
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출
- **국내규정:**
- **사용제한에 대한 정보:**
노동자들은이러한예방준비하에암을유발시키는성분을함유한위험물을버리지말아야한다. 개별적인경우에관청은예외를허가할수있다.
- **화학물질 안전성 평가:** 화학물질 안전성 평가가 수행되지 않음

16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은기술하지않았으며계약적인법률관계에기반을두고있지도않다

- **최초 작성일자:** 2018.10.30
- **개정 횟수 및 최종 개정일자:** 1 / 2018.10.30
- **약어와 두문자어:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances

(10 쪽에계속)

물질안전보건자료

GHS에 따라

기압점: 2018.10.30

개정: 2018.10.30

제품명: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(9 쪽부터계속)

ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

KR

Helaiian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 30.10.2018

Disemak semula pada 30.10.2018

1 Pengenalan bahan kimia berbahaya dan pembekal

- **Pengenal pasti produk**
- **Nama dagang: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE**
- **Nombor artikel: 15714, 15714-S, 15714-1L, 15714-SP**
- **Kegunaan yang disarankan bagi bahan dan sekatan penggunaan** Tiadak maklumat lanjut yang diperoleh.
- **Penggunaan bahan/sediaan** Bahan kimia makmal
- **Perincian pembekal risalah data keselamatan**
- **Pengilang/Pembekal:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Maklumat lanjut dapat diperoleh daripada:** Product safety department
- **Nombor telefon kecemasan:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Pengenalan bahaya

- **Pengelasan bahan atau campuran**



Tengkorak dan tulang bersilang

Toks. Akut 3 H311 Toksik jika terkena kulit.

Toks. Akut 3 H331 Toksik jika tersedut.



Bahaya kesihatan

Muta. 2 H341 Disyaki menyebabkan kecacatan genetik.

Kars. 1B H350 Boleh menyebabkan kanser.



Kakisan

Kks. Kulit 1B H314 Menyebabkan lecuran kulit dan kerosakan mata yang teruk.

Kros. Mata 1 H318 Menyebabkan kerosakan mata yang serius.



Toks. Akut 4 H302 Memudaratkan jika tertelan.

Pem. Kulit 1 H317 Boleh menyebabkan tindak balas alahan kulit.

- **Melabelkan unsur**

- **Unsur label GHS** Produk ini dikelaskan dan dilabelkan menurut Sistem Terharmoni Global (GHS).

(Bersambung ke halaman 2)

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Nama dagang: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(Sambungan halaman 1)

· **Piktogram hazard**



· **Perkataan isyarat Bahaya**

· **Komponen pelabelan yang menentukan bahaya:**

Formaldehid

· **Pernyataan hazard**

Memudaratkan jika tertelan.

Toksik jika terkena kulit atau tersedut.

Menyebabkan lecuran kulit dan kerosakan mata yang teruk.

Boleh menyebabkan tindak balas alahan kulit.

Disyaki menyebabkan kecacatan genetik.

Boleh menyebabkan kanser.

· **Pernyataan langkah perlindungan**

Jangan sedut habuk atau kabus.

JIKA TERKENA KULIT (atau rambut): Segera tanggalkan/buka semua pakaian yang tercemar. Basuh kulit dengan air/pancuran air.

JIKA TERKENA MATA: Bilas berhati-hati dengan air selama beberapa minit. Tanggalkan kanta lekap, jika ada dan dapat dilakukan dengan mudah. Teruskan membilas.

Segera hubungi PUSAT RACUN/doktor.

Langkah khas (lihat label ini).

Simpan di tempat berkunci.

Lupuskan kandungan/bekas menurut peraturan tempatan/wilayah/kebangsaan/antarabangsa.

· **Bahaya lain**

· **Keputusan penilaian PBT dan vPvB**

· **PBT:** Tidak berkenaan

· **vPvB:** Tidak berkenaan

3 Komposisi dan maklumat mengenai ramuan bahan kimia berbahaya

· **Ciri kimia:** Campuran

· **Keterangan:** Campuran bahan disenaraikan di bawah bersama dengan bahan tambah tidak berbahaya.

· **Komponen berbahaya :**

50-00-0	Formaldehid	>25-≤50%
	Toks. Akut 3, H301; Toks. Akut 3, H311; Toks. Akut 3, H331; Muta. 2, H341; Kars. 1B, H350; Kks. Kulit 1B, H314; Pem. Kulit 1, H317	

4 Langkah-langkah pertolongan cemas

· **Keterangan langkah pertolongan cemas**

· **Maklumat am:**

Segera tanggalkan mana-mana pakaian yang terkena produk.

Gejala keracunan boleh berlaku selepas beberapa jam, maka rawatan perubatan hendaklah diberikan sekurang-kurangnya 48 jam selepas kemalangan.

Tanggalkan kelengkapan pernafasan hanya selepas pakaian yang tercemar telah ditanggalkan semuanya.

Berikan pernafasan bantuan jika pernafasan tidak tetap atau terhenti.

(Bersambung ke halaman 3)

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(Sambungan halaman 2)

- **Jika tersedut:**
Berikan udara bersih atau oksigen, dapatkan rawatan doktor.
Jika mangsa tidak sedarkan diri, letakkan pesakit dengan stabil dalam kedudukan mengiring untuk diangkat.
- **Jika terkena kulit:** Segera basuh dengan air dan sabun serta bilas bersih-bersih.
- **Jika terkena mata:**
Bilas mata sambil membukanya di bawah air yang mengalir selama beberapa minit. Kemudian hubungi doktor.
- **Jika tertelan:**
Segera hubungi doctor.
Minum air yang banyak dan berikan udara bersih. Segera hubungi doktor.
- **Maklumat untuk doktor:**
- **Gejala dan kesan paling penting, akut dan lewat** Tiadak maklumat lanjut yang diperoleh.
- **Arahan bagi apa-apa rawatan perubatan dan rawatan khas yang diperlukan**
Tiadak maklumat lanjut yang diperoleh.

5 Langkah-langkah pemadaman kebakaran

- **Bahan pemadam api**
- **Agen pemadam yang sesuai:**
CO₂, serbuk atau semburan air. Padam kebakaran besar dengan semburan air atau busa rintangan alkohol.
- **Bahaya khusus yang timbul daripada bahan atau campuran** Tiadak maklumat lanjut yang diperoleh.
- **Panduan kepada pemadam kebakaran**
- **Kelengkapan perlindungan:** Peralatan perlindungan pernafasan mulut.

6 Langkah-langkah pelepasan tidak sengaja

- **Langkah perlindungan diri, kelengkapan pelindung dan prosedur kecemasan**
Pakai kelengkapan perlindungan. Jauhkan mereka yang tidak dilindung dari kawasan tercemar.
- **Langkah perlindungan alam sekitar:**
Cairkan dengan air yang banyak.
Jangan biarkannya memasuki pembentung/air permukaan atau tanah.
- **Kaedah dan bahan untuk pembendungan dan pembersihan:**
Serap dengan bahan cecair pengikat (pasir, diatomit, pengikat asid, pengikat semesta, habuk papan)
Gunakan agen penutralan.
Lupuskan bahan tercemar sebagai sisa mengikut perkara 13.
Pastikan pengalihudaraan mencukupi.
- **Rujukan ke bahagian lain**
Lihat Bahagian 7 untuk maklumat pengendalian yang selamat.
Lihat Bahagian 8 untuk maklumat kelengkapan perlindungan diri.
Lihat Bahagian 13 untuk maklumat pelupusan.

7 Pengendalian dan penyimpanan

- **Pengendalian:**
- **Langkah perlindungan untuk pengendalian selamat**
Pastikan pengalihudaraan/ekzos yang mencukupi di tempat kerja.
Buka dan kendalikan bekas dengan cermat.
Elakkan pembentukan aerosol.
- **Maklumat kebakaran dan perlindungan daripada letupan:** Pastikan alat perlindungan pernafasan sentiasa ada.
- **Keadaan untuk penyimpanan selamat, termasuk apa-apa ketakserasian**
- **Penyimpanan:**
- **Keperluan yang mesti dipenuhi oleh bilik stor dan ruang simpanan.** Tiada keperluan khusus.

(Bersambung ke halaman 4)

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Nama dagang: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(Sambungan halaman 3)

- **Maklumat penyimpanan di dalam satu tempat penyimpanan yang biasa:** Tidak diperlukan.
- **Maklumat lanjut tentang syarat penyimpanan:** Pastikan bekas sentiasa bertutup rapat.
- **Kegunaan akhir yang khusus:** Tiada maklumat lanjut yang diperolehi.

8 Kawalan pendedahan dan perlindungan diri

- **Maklumat tambahan tentang reka bentuk kemudahan teknikal:** Tiada maklumat lanjut, lihat perkara 7.
- **Parameter kawalan**

· **Ramuan dengan nilai had yang memerlukan pemantauan di tempat kerja:**

50-00-0 Formaldehid

PEL had siling: 0.37 mg/m³, 0.3 ppm

- **Maklumat tambahan:** Senarai yang sah semasa pembuatan digunakan sebagai asas.
- **Kawalan pendedahan**
- **Kelengkapan perlindungan diri:**
- **Langkah perlindungan dan kebersihan am:**
 - Jauhkan daripada makanan, minuman dan makanan haiwan.
 - Segera tanggalkan semua pakaian yang tercemar dan kotor.
 - Basuh tangan sebelum berhenti rehat dan apabila kerja selesai.
 - Simpan pakaian perlindungan secara berasingan.
 - Elakkan daripada terkena mata.
 - Elakkan daripada terkena mata dan kulit.
- **Perlindungan pernafasan:**
 - Jika berlaku pendedahan sekejap atau sedikit pencemaran, gunakan alat penapis pernafasan. Jika berlaku pendedahan yang intensif atau berpanjangan, gunakan alat pernafasan perlindungan serba lengkap.
- **Perlindungan tangan:**



Sarung tangan pelindung.

Bahan sarung tangan hendaklah telus dan kalis terhadap produk/bahan/sediaan.

Oleh sebab tiada ujian yang dijalankan, maka tiada syor bagi bahan sarung tangan yang boleh diberikan untuk produk/sediaan/campuran kimia.

Pemilihan bahan sarung tangan berdasarkan waktu penembusan, kadar pembauran dan degradasi.

- **Bahan sarung tangan**
 - Pemilihan sarung tangan yang sesuai bukan hanya bergantung pada bahannya, tetapi juga tanda kualiti lainnya serta perbezaannya daripada satu pengeluar dengan pengeluar yang lain. Memandangkan produk merupakan suatu sediaan daripada beberapa bahan, ketahanan bahan sarung tangan tidak boleh dipastikan terlebih dahulu, oleh itu sarung tangan hendaklah diperiksa sebelum digunakan.
- **Jangka masa penyerapan bahan sarung tangan**
 - Waktu kemunculan yang tepat hendaklah diperolehi pengeluar sarung tangan pelindung dan hendaklah dipatuhi.
- **Perlindungan mata:**



Gogal bertutup rapat

MY

(Bersambung ke halaman 5)

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Nama dagang: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(Sambungan halaman 4)

9 Sifat fizikal dan kimia

<ul style="list-style-type: none"> · Maklumat tentang ciri fizik dan kimia · Maklumat Am · Rupa: <ul style="list-style-type: none"> Bentuk: Cecair Warna: Jernih · Bau: Ciri · Ambang bau: Tidak ditentukan. 	
· Nilai pH pada 20 °C:	2.8
· Perubahan pada keadaan	
Takat lebur/takat beku	Tidak ditentukan.
Takat didih awal dan julat didih	>93 °C
· Takat kilat:	>60 °C
· Kemudahbakaran (pepejal, gas)	Tidak berkenaan
· Suhu pencucuhan:	300 °C
· Suhu penguraian:	Tidak ditentukan.
· Suhu pengautocucuhan	Produk tidak tercucuh sendiri
· Bahaya letupan:	Tidak ditentukan.
· Had letupan :	
Bawah:	7 Vol %
Atas:	73 Vol %
· Tekanan wap pada 20 °C:	23 hPa
· Ketumpatan pada 20 °C:	0.9392 g/cm ³
· Ketumpatan bandingan	Tidak ditentukan.
· Ketumpatan wap	Tidak ditentukan.
· Kadar penyejatan	Tidak ditentukan.
· Keterlarutan dalam / Keterlarutcampuran dengan	
Air:	Terlarut campur sepenuhnya.
· Pekali sekatan: n-oktanol/air	Tidak ditentukan.
· Kelikatan:	
Dinamik:	Tidak ditentukan.
Kinematik:	Tidak ditentukan.
· Kandungan pelarut:	
Pelarut organik:	32.0 %
Air:	68.0 %
Kandungan pepejal:	0.0 %
· Maklumat lain	Tiada maklumat lanjut yang diperoleh.

10 Kestabilan dan kereaktifan

- Kereaktifan Tiada maklumat lanjut yang diperoleh.
- Kestabilan kimia
- Penguraian terma/keadaan yang perlu dielakkan: Tiada penguraian jika digunakan mengikut spesifikasi.
- Kemungkinan tindak balas berbahaya Tiada tindak balas berbahaya yang diketahui.

(Bersambung ke halaman 6)

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(Sambungan halaman 5)

- **Keadaan yang perlu dielakkan** Tiada maklumat lanjut yang diperoleh.
- **Bahan tidak serasi:** Tiada maklumat lanjut yang diperoleh.
- **Produk penguraian yang berbahaya:** Tiada produk penguraian berbahaya yang diketahui.

11 Maklumat toksikologi

- **Maklumat tentang kesan toksikologi**
- **Ketoksikan akut:**

- **Nilai LD/LC50 yang berkaitan untuk pengelasan:**

50-00-0 Formaldehid

Oral	LD50	>200 mg/kg (rat)
------	------	------------------

- **Kesan kerengsaan primer:**
- **Kakisan atau kerengsaan kulit** Kesan kaustik yang kuat pada kulit dan mukus membran.
- **Kerosakan atau kerengsaan mata yang serius**
Kesan kaustik yang kuat.
Perengsa yang kuat dengan bahaya kecederaan mata yang teruk.
- **Pemekaan pernafasan / kulit** Pemekaan mungkin berlaku jika terkena kulit.
- **Maklumat tambahan toksikologi:**
Produk menunjukkan bahaya berikut mengikut kaedah pengiraan Garis Panduan Pengelasan Am EU bagi Sediaan seperti yang dikeluarkan dalam versi terbaru:
Toksik
Memudaratkan
Mengakis
Perengsa
Tertelan akan menyebabkan kesan kaustik yang kuat pada mulut dan tekak serta bahaya perliangan esofagus dan perut.
Karsinogen.
- **Maklumat bagi kumpulan berikut tentang kesan yang mungkin timbul.**
- **Kesan CMR (karsinogen, mutagen dan gangguan kesuburan)**
Muta. 2, Kars. 1B

12 Maklumat ekologi

- **Ketoksikan**
- **Ketoksikan akuatik:** Tiada maklumat lanjut yang diperoleh.
- **Keterusan dan keterdegradasikan** Tiada maklumat lanjut yang diperoleh.
- **Kelakuan dalam sistem alam sekitar:**
- **Potensi bioakumulatif** Tiada maklumat lanjut yang diperoleh.
- **Mobiliiti di dalam tanah** Tiada maklumat lanjut yang diperoleh.
- **Maklumat tambahan ekologi:**
- **Nota am:**
Bahaya air kelas 2 (Peraturan Jerman) (Penilaian sendiri): berbahaya kepada air
Jangan biarkan produk memasuki air tanah, saluran air atau sistem pembetulan.
Tidak boleh memasuki air pembetulan atau parit saliran tanpa dcairkan atau dineutralkan.
Bahaya kepada air minuman walaupun amat sedikit produk memasuki tanah.
- **Keputusan penilaian PBT dan vPvB**
- **PBT:** Tidak berkenaan
- **vPvB:** Tidak berkenaan
- **Kesan buruk yang lain** Tiada maklumat lanjut yang diperoleh.

MY

(Bersambung ke halaman 7)

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Nama dagang: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(Sambungan halaman 6)

13 Maklumat pelupusan

- **Kaedah rawatan sisa**
- **Syor:**
Tidak boleh dilupuskan bersama dengan sampah isi rumah. Jangan biarkan produk memasuki sistem pembentungan.
- **Pembungkusan yang tidak bersih:**
- **Syor:** Pelupusan mestilah dijalankan menurut peraturan rasmi
- **Agan pencuci yang disyorkan:** Air, jika perlu, digunakan bersama dengan agan pencuci.

14 Maklumat pengangkutan

· Nombor UN · ADR, IMDG, IATA	UN2209
· Nama penghantaran UN yang betul · ADR · IMDG, IATA	2209 FORMALDEHYDE SOLUTION FORMALDEHYDE SOLUTION
· pengangkutan kelas bahaya · ADR, IMDG, IATA	
	
· Kelas · Label	8 Bahan mengakis. 8
· Kumpulan pembungkusan · ADR, IMDG, IATA	III
· Hazard persekitaran:	Tidak berkenaan
· Langkah perlindungan khas untuk pengguna · Kod bahaya (Kemler): · Nombor EMS: · Stowage Category	Amaran: Bahan mengakis. 80 F-A,S-B A
· Pengangkutan dalam pukal menurut Lampiran II MARPOL73/78 dan Kod IBC	Tidak berkenaan
· Pengangkutan/Maklumat Tambahan:	
· ADR · Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

(Bersambung ke halaman 8)

MY

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Nama dagang: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(Sambungan halaman 7)

· **"Peraturan Model" UN:**

UN 2209 FORMALDEHYDE SOLUTION, 8, III

15 Maklumat pengawalseliaan

- **Peraturan/undang-undang keselamatan, kesihatan dan persekitaran khusus untuk bahan atau campuran tersebut**
- **Unsur label GHS** Produk ini dikelaskan dan dilabelkan menurut Sistem Terharmoni Global (GHS).
- **Piktogram hazard**



GHS05 GHS06 GHS08

- **Perkataan isyarat Bahaya**
- **Komponen pelabelan yang menentukan bahaya:**
Formaldehid
- **Pernyataan hazard**
Memudaratkan jika tertelan.
Toksik jika terkena kulit atau tersedut.
Menyebabkan lecuran kulit dan kerosakan mata yang teruk.
Boleh menyebabkan tindak balas alahan kulit.
Disyaki menyebabkan kecacatan genetik.
Boleh menyebabkan kanser.
- **Pernyataan langkah perlindungan**
Jangan sedut habuk atau kabus.
JIKA TERKENA KULIT (atau rambut): Segera tanggalkan/buka semua pakaian yang tercemar. Basuh kulit dengan air/pancuran air.
JIKA TERKENA MATA: Bilas berhati-hati dengan air selama beberapa minit. Tanggalkan kanta lekap, jika ada dan dapat dilakukan dengan mudah. Teruskan membilas.
Segera hubungi PUSAT RACUN/doktor.
Langkah khas (lihat label ini).
Simpan di tempat berkunci.
Lupuskan kandungan/bekas menurut peraturan tempatan/wilayah/kebangsaan/antarabangsa.
- **Peraturan kebangsaan:**
- **Maklumat had kegunaan:**
Pekerja tidak dibenarkan terdedah kepada bahan karsinogen berbahaya yang terkandung dalam sediaan ini. Pengecualian boleh dibuat oleh pihak berkuasa dalam kes tertentu.
- **Penilaian keselamatan bahan kimia:** Penilaian Keselamatan Bahan Kimia belum dilakukan.

16 Maklumat lain

Maklumat ini berdasarkan maklumat kami yang terkini. Walau bagaimanapun, ini tidak akan menjadi jaminan bagi apa-apa ciri produk yang khusus dan tidak akan mewujudkan hubungan kontraktual yang sah dari segi undang-undang.

- **Singkatan dan akronim:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

(Bersambung ke halaman 9)

Helaiian Data Keselamatan
menurut P.U.(A) 310/2013

Tarikh cetak 30.10.2018

Disemak semula pada 30.10.2018

Nama dagang: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(Sambungan halaman 8)

EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Toks. Akut 3: Ketoksikan akut – Kategori 3
Toks. Akut 4: Ketoksikan akut – Kategori 4
Kks. Kulit 1B: Kakisan atau kerengsaan kulit – Kategori 1B
Kros. Mata 1: Kerosakan mata atau kerengsaan mata yang serius – Kategori 1
Pem. Kulit 1: Pemekaan kulit – Kategori 1
Muta. 2: Kemutagenan sel germa – Kategori 2
Kars. 1B: Kekarsinogenan – Kategori 1B

MY

物質安全資料表

根據 GB/T 16483-2008, GB/T 17519-2013

打印日期 2018.10.30

在 2018.10.30 審核

1 化學品及企業標識

- 產品識別者
- 化學品中文(英文)名稱, 化學品俗名或商品名: **PARAFORMALDEHYDE 32% SOLUTION, EM GRADE**
- 商品編號: 15714, 15714-S, 15714-1L, 15714-SP
- 相應純物質或者混合物的相關下位用途及禁止用途 無相關詳細資料。
- 原材料的應用/準備工作進行 實驗室化學物
- 安全技術說明書內供應商詳細信息
- 企業名稱:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- 可獲取更多資料的部門: Product safety department
- 緊急聯繫電話號碼:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 危險性概述

· 緊急情況概述:

純淨的, 液體, 可燃液體。吞食有害。皮膚接觸或吸入可致中毒。造成嚴重皮膚灼傷和眼睛損傷。可能造成皮膚過敏。懷疑造成遺傳性缺陷。可能致癌。

· GHS危險性類別



骷髏和交叉骨

急毒性物質(皮膚) 第3級 H311 皮膚接觸有毒
急毒性物質(吸入) 第3級 H331 吸入有毒



健康危險

生殖細胞致突變性物質 第2級 H341 懷疑造成遺傳性缺陷
致癌物質 第1B級 H350 可能致癌



腐蝕

腐蝕/刺激皮膚物質 第1B級 H314 造成嚴重皮膚灼傷和眼睛損傷
嚴重損傷/刺激眼睛物質 第1級 H318 造成嚴重眼睛損傷



急毒性物質(吞食) 第4級 H302 吞食有害
皮膚過敏物質 第1級 H317 可能造成皮膚過敏
易燃液體 第4級 H227 可燃液體

(在 2 頁繼續)

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化學品中文(英文)名稱, 化學品俗名或商品名: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(在 1 頁繼續)

· 標籤因素

· GHS標籤元素 本產品根據化學物質分類及標記全球協調制度(GHS)進行了分類及標記。

· 圖示



GHS05 GHS06 GHS08

· 名稱 危險

· 標籤上辨別危險的成份:

福爾馬林溶液

· 危險字句

可燃液體

吞食有害

皮膚接觸或吸入可致中毒。

造成嚴重皮膚灼傷和眼睛損傷

可能造成皮膚過敏

懷疑造成遺傳性缺陷

可能致癌

· 警戒字句

· 事故響應

如皮膚(或頭髮)沾染: 立即移除或脫掉所有沾染的衣服。用水沖洗/淋洗皮膚。

如進入眼睛: 用水小心清洗數分鐘。如帶隱形眼鏡且可方便地取出, 取出隱形眼鏡。繼續清洗。

立即呼叫解毒中心/醫生

專項處置(參見本標示)。

立即脫掉所有沾染的衣服, 清洗後方可重新使用

· 安全貯存

加鎖存放。

· 廢棄處置

按照地方/區域/國家/國際法規處理內容物之廢棄/容器。

· 其他有害性

· PBT(殘留性、生物濃縮性、毒性物質) 及 vPvB(高殘留性、高生物濃縮性物質)評價結果

· PBT(殘留性、生物濃縮性、毒性物質) 不適用的

· vPvB(高殘留性、高生物濃縮性物質): 不適用的

3 成分/組成資訊

· 混合物

· 描述: 由以下含有無害添加劑的成分組成的混合物

· 危險的成分:

50-00-0	福爾馬林溶液 急毒性物質(吞食) 第3級, H301; 急毒性物質(皮膚) 第3級, H311; 急毒性物質(吸入) 第3級, H331; 生殖細胞致突變性物質 第2級, H341; 致癌物質 第1B級, H350; 腐蝕/刺激皮膚物質 第1B級, H314; 皮膚過敏物質 第1級, H317	>25-≤50%
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4 急救措施

· 應急措施要領

· 總說明:

馬上脫下染有該產品的衣服。

(在 3 頁繼續)

物質安全資料表

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(在 2 頁繼續)

中毒的症狀可能會在幾個小時以後才出現;因此在發生事故之後起碼要有 48 小時的醫療觀察。
只在徹底地脫去了已被汙染的衣服之後才能移走呼吸儀器。
萬一出現了不規則的呼吸或呼吸的阻礙,請為病人提供人工呼吸。

- **吸入:**
供給新鮮空氣或氧氣;叫醫生。
萬一病人不清醒時,請讓病人側趟以便移動。
- **皮膚接觸:** 馬上用水和肥皂進行徹底的沖洗。
- **眼睛接觸:** 張開眼睛在流水下沖洗數分鐘, 然後諮詢醫生。
- **食入:**
馬上召喚醫生。
喝大量的清水和提供新鮮的空氣, 馬上召喚醫生。
- **給醫生的資料:**
- **最重要的急慢性症狀及其影響** 無相關詳細資料。
- **需要及時的醫療處理及特別處理的症狀** 無相關詳細資料。

5 消防措施

- **滅火方法**
- **滅火的方法和滅火劑:** 二氧化碳 (CO₂)、滅火粉末或灑水。使用灑水或抗酒精泡沫滅火劑撲滅較大的火種。
- **特別危險性** 無相關詳細資料。
- **特殊滅火方法**
- **消防人員特殊的防護裝備:** 口腔呼吸保護裝置。

6 洩漏應急處理

- **保護措施** 帶上保護儀器, 讓未受到保護的人們遠離。
- **環境保護措施:**
用大量的水進行稀釋。
切勿讓其進入下水道/水面或地下水。
- **密封及淨化方法和材料:**
吸收液體粘合原料 (沙粒、矽藻土、酸性粘合劑、通用粘合劑、鋸屑)。
使用中和劑。
根據第 13 條條款棄置受汙染物。
確保有足夠的通風裝置。
- **參照其他部分**
有關安全處理的資料請參閱第 7 節。
有關個人保護裝備的資料請參閱第 8 節。
有關棄置的資料請參閱第 13 節。

7 操作處置與儲存

- **操作處置**
- **儲存**
確保工作間有良好的通風/排氣裝置。
小心打開及處理貯藏器。
防止氣溶膠的形成。
- **有關火災及防止爆炸的資料:** 提供呼吸保護裝置。
- **混合危險性等安全儲存條件**
- **儲存:**
· **儲存庫和容器須要達到的要求:** 沒有特別的要求。
- **有關使用一個普通的儲存設施來儲存的資料:** 不需要。

(在 4 頁繼續)

物質安全資料表

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(在 3 頁繼續)

- 有關儲存條件的更多資料: 將容器密封。
- 具體的最終用戶 無相關詳細資料。

8 接觸控制和個體防護

- 工程控制方法: 沒有進一步數據, 見第 7 項。
- 控制變數

· 在工作場需要監控的限值成分

50-00-0 福爾馬林溶液

PEL (TW) PC-TWA: 1.2 mg/m³, 1 ppm

OEL (CN) 上限值: 0.5 mg/m³

- 額外的資料: 制作期間有效的清單將作為基礎來使用。

· 遺漏控制

· 個人防護設備:

· 一般保護和衛生措施:

遠離食品、飲料和飼料。

立即除去所有的不潔的和被污染的衣服。

在休息之前和工作完畢後請清洗雙手。

分開儲存保護性衣服。

避免和眼睛接觸。

避免和眼睛及皮膚接觸。

· 呼吸系統防護:

如果會短暫接觸或在低污染的情況下, 請使用呼吸過濾裝置。如果會深入或較長時間接觸, 請使用獨立的呼吸保護裝置。

· 手防護:



保護手套

手套的物料必須是不滲透性的, 且能抵抗該產品/物質/添加劑。

基於缺乏測試, 對於產品/制劑/化學混合物, 並不會提供手套材料的建議

選擇手套材料時, 請注意材料的滲透時間, 滲濾率和降解參數

· 手套材料

選擇合適的手套不單取決於材料, 亦取決於質量特征, 以及來自哪一間生產廠家, 因為該產品是由很多材料

配制而成, 手套材料的抵抗力並不可預計, 所以, 必須在使用之前進行檢查

· 滲入手套材料的時間 請向勞保手套生產廠家獲取準確的破裂時間並觀察實際的破裂時間

· 眼睛防護:



密封的護目鏡

9 理化特性

· 有關基本物理及化學特性的資訊

· 一般說明

· 外觀:

形狀: 液體

(在 5 頁繼續)

物質安全資料表

根據 GB/T 16483-2008, GB/T 17519-2013

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化學品中文(英文)名稱, 化學品俗名或商品名: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(在 4 頁繼續)

· 顏色:	純淨的
· 氣味:	有特性的
· 嗅覺閾限	未決定.
· pH值 在 20 °C:	2.8
· 條件的更改	
· 熔點:	未確定的
· 沸點/初沸點和沸程:	>93 °C
· 閃點:	>60 °C
· 可燃性 (固體、氣體):	不適用的
· 點火溫度:	300 °C
· 分解溫度:	未決定.
· 自燃溫度:	該產品是不自燃的
· 爆炸的危險性:	未決定.
· 爆炸極限:	
· 較低:	7 Vol %
· 較高:	73 Vol %
· 蒸氣壓 在 20 °C:	23 hPa
· 密度 在 20 °C:	0.9392 g/cm ³
· 相對密度	未決定.
· 蒸氣密度	未決定.
· 蒸發速率	未決定.
· 溶解性	
· 水:	完全可拌和的
· n-辛醇/水分配係數:	未決定.
· 黏性:	
· 動態:	未決定.
· 運動學的:	未決定.
· 溶劑成份:	
· 有機溶劑:	32.0 %
· 水:	68.0 %
· 固體成份:	0.0 %
· 其他資訊	無相關詳細資料。

10 穩定性和反應性

- 反應性 無相關詳細資料。
- 穩定性
- 熱分解/要避免的情況: 如果遵照規格使用則不會分解。
- 有害反應可能性 未有已知的危險反應。
- 應避免的條件 無相關詳細資料。
- 不相容的物質: 無相關詳細資料。
- 危險的分解產物: 未知有危險的分解產品。

TW

(在 6 頁繼續)

物質安全資料表

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(在 5 頁繼續)

11 毒理學資訊

· 對毒性學影響的資訊

· 急性毒性:

· 與分類相關的 LD/LC50 值:

50-00-0 福爾馬林溶液

口腔	LD50	>200 mg/kg (rat)
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· 主要的刺激性影響:

· **皮膚:** 在皮膚和粘膜上造成強烈的腐蝕性影響.

· 在眼睛上面:

強烈的腐蝕性影響.

強烈的刺激性和造成嚴重傷害眼睛的危險.

· **致敏作用:** 通過皮膚接觸可能造成敏化作用.

· 更多毒物的資料:

根據有關配製的一般歐盟分類指南的計算方法(刊印在最新版本),該產品顯示以下的危險:

毒性的

有害的

腐蝕性的

刺激性的

吞咽該產品除了導致口部和喉嚨出現強烈的腐蝕性現象之外,還有對食道和胃部造成穿孔的危險.

致癌的.

· 對以下組別可能產生影響的資料:

· **CMR作用(致癌、導致基因突變、對生殖系統有害)**

生殖細胞致突變性物質 第2級, 致癌物質 第1B級

12 生態學資訊

· 生態毒性

· **水生毒性:** 無相關詳細資料。

· **持久性和降解性** 無相關詳細資料。

· 環境系統習性:

· **潛在的生物累積性** 無相關詳細資料。

· **土壤內移動性** 無相關詳細資料。

· 額外的生態學資料:

· 總括注解:

水危害級別 2 (德國規例)(通過名單進行自我評估): 對水是危害的

不要讓該產品接觸地下水、水道或汗水系統.

不要讓未被稀釋或未被中和的產品接觸下水道或排水溝渠.

即使是少量的產品滲入地下也會對飲用水造成危險.

· **PBT(殘留性、生物濃縮性、毒性物質) 及 vPvB(高殘留性、高生物濃縮性物質)評價結果**

· **PBT(殘留性、生物濃縮性、毒性物質)** 不適用的

· **vPvB(高殘留性、高生物濃縮性物質):** 不適用的

· **其他副作用** 無相關詳細資料。

13 廢棄處置

· 廢棄處置方法

· **建議:** 不能將該產品和家居垃圾一起丟棄. 不要讓該產品接觸汗水系統.

(在 7 頁繼續)

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(在 6 頁繼續)

- 受污染的容器和包裝:
- 建議: 必須根據官方的規章來丟棄.
- 建議的清洗劑: 如有必要請使用水及清潔劑進行清潔.

14 運輸資訊

· 聯合國危險貨物編號(UN號)	UN2209
· ADR, IMDG, IATA	
· UN適當裝船名	
· ADR	2209 FORMALDEHYDE SOLUTION
· IMDG, IATA	FORMALDEHYDE SOLUTION
· 運輸危險等級	
· ADR, IMDG, IATA	
	
· 級別	8 腐蝕性物質
· 標籤	8
· 包裝組別	
· ADR, IMDG, IATA	III
· 危害環境:	不適用的
· 用戶特別預防措施	警告: 腐蝕性物質
· 危險編碼:	80
· EMS 號碼:	F-A,S-B
· Stowage Category	A
· MARPOL73/78(針對船舶引起的海洋污染預防協約) 附件書2及根據IBC Code(國際裝船貨物編碼)的大量 運送	不適用的
· 運輸/額外的資料:	
· ADR	
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "標準規定":	UN 2209 FORMALDEHYDE SOLUTION, 8, III

-TW-

(在 8 頁繼續)

物質安全資料表

根據 GB/T 16483-2008, GB/T 17519-2013

打印日期 2018.10.30

在 2018.10.30 審核

化學品中文(英文)名稱, 化學品俗名或商品名: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(在 7 頁繼續)

15 法規資訊

· 對相應純物質或者混合物的安全、保健及環境法規/法律

· 中國現有化學物質名錄

列出所有成分

· TCSCA

· 列管編號

50-00-0	福爾馬林溶液	66/01
---------	--------	-------

· 毒性分類

50-00-0	福爾馬林溶液	2, 3
---------	--------	------

· 管制濃度 (w/w%)

50-00-0	福爾馬林溶液	15
---------	--------	----

· 大量運作基準 (公斤)

50-00-0	福爾馬林溶液	50
---------	--------	----

· TCSI - Taiwan Chemical Substance Inventory

列出所有成分

· GHS標識元素 本產品根據化學物質分類及標記全球協調制度(GHS)進行了分類及標記。

· 圖示



GHS05 GHS06 GHS08

· 名稱 危險

· 標籤上辨別危險的成份:

福爾馬林溶液

· 危險字句

可燃液體

吞食有害

皮膚接觸或吸入可致中毒

造成嚴重皮膚灼傷和眼睛損傷

可能造成皮膚過敏

懷疑造成遺傳性缺陷

可能致癌

· 警戒字句

· 事故響應

如皮膚(或頭髮)沾染: 立即移除或脫掉所有沾染的衣物。用水沖洗/淋洗皮膚。

如進入眼睛: 用水小心清洗數分鐘。如帶隱形眼鏡且可方便地取出, 取出隱形眼鏡。繼續清洗。

立即呼叫解毒中心/醫生

專項處置(參見本標示)。

立即脫掉所有沾染的衣服, 清洗後方可重新使用

· 安全貯存

加鎖存放。

· 廢棄處置

按照地方/區域/國家/國際法規處理內容物之廢棄/容器。

· 國家的規章:

· 有關使用限制的資料: 禁止員工接觸在配制中含有致癌的物料. 在某些情況中由當局作出例外的決定.

(在 9 頁繼續)

物質安全資料表

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打印日期 2018.10.30

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化學品中文(英文)名稱, 化學品俗名或商品名 : PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(在 8 頁繼續)

· 化學物質安全性評價: 尚未進行化學物質安全性評價

16 其他資訊

該資料是基於我們目前的知識。然而,這並不構成對任何特定產品特性的擔保並且不建立一個法律上有效的合同關係。

縮寫:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: 持久性生物累積性有毒物質

vPvB: very Persistent and very Bioaccumulative

易燃液體 第4級: Flammable liquids – Category 4

急性物質(吞食) 第3級: Acute toxicity – Category 3

急性物質(吞食) 第4級: Acute toxicity – Category 4

腐蝕/刺激皮膚物質 第1B級: Skin corrosion/irritation – Category 1B

嚴重損傷/刺激眼睛物質 第1級: Serious eye damage/eye irritation – Category 1

皮膚過敏物質 第1級: Skin sensitisation – Category 1

生殖細胞致突變性物質 第2級: Germ cell mutagenicity – Category 2

致癌物質 第1B級: Carcinogenicity – Category 1B

TW

Sikkerhetsdatablad
iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 30.10.2018

revidert den: 30.10.2018

Avsnitt 1: Identifikasjon av stoffet/stoffblandingen og av selskapet/foretaket

- **1.1 Produktidentifikator**
- **Handelsnavn:** PARAFORMALDEHYDE 32% SOLUTION, EM GRADE
- **Artikkelnummer:** 15714, 15714-S, 15714-1L, 15714-SP
- **1.2 Relevante identifiserte bruksområder for stoffet eller stoffblandingen og bruk som frarådes**
Ikke noe mer relevant informasjon tilgjengelig.
- **Bruk av stoffet/ tilberedning** laboratoriekjemikalier
- **1.3 Opplysninger om leverandøren av sikkerhetsdatabladet**
- **Produsent/leverandør:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Avdeling for nærmere informasjon:** Product safety department
- **1.4 Nødtelefonnummer**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

Avsnitt 2: Fareidentifikasjon

- **2.1 Klassifisering av stoffet eller stoffblandingen**
- **Klassifisering i henhold til EC-forskrift nr.1272/2008**



GHS06 Dødningshode med korslagte knokler

Acute Tox. 3 H311 Giftig ved hudkontakt.

Acute Tox. 3 H331 Giftig ved innånding.



GHS08 Helsefare

Muta. 2 H341 Mistenkes å kunne gi genetiske skader.

Carc. 1B H350 Kan forårsake kreft.



GHS05 Etsende virkning

Skin Corr. 1B H314 Gir alvorlige etseskader på hud og øyne.

Eye Dam. 1 H318 Gir alvorlig øyeskade.



GHS07

Acute Tox. 4 H302 Farlig ved svelging.

Skin Sens. 1 H317 Kan utløse en allergisk hudreaksjon.

STOT SE 3 H335 Kan forårsake irritasjon av luftveiene.

(fortsatt på side 2)

NO

Sikkerhetsdatablad

iflg. forordning (EF) nr. 1907/2006, Artikkel 31

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(fortsatt fra side 1)

2.2 Merkingselementer

Merking iht. bestemmelse (EC) Nr. 1272/2008

Produktet er klassifisert og merket i henhold til CLP-forordningen.

Farepiktogrammer



GHS05 GHS06 GHS08

Varselord Fare

Farebestemmende komponenter ved etikettering:

formaldehyd

Faresetninger

- H302 Farlig ved svelging.
 H311+H331 Giftig ved hudkontakt eller innånding.
 H314 Gir alvorlige etseskader på hud og øyne.
 H317 Kan utløse en allergisk hudreaksjon.
 H341 Mistenkes å kunne gi genetiske skader.
 H350 Kan forårsake kreft.
 H335 Kan forårsake irritasjon av luftveiene.

Sikkerhetssetninger

- P303+P361+P353 VED HUDKONTAKT (eller håret): Tilsølte klær må fjernes straks. Skyll/dusj huden med vann.
 P305+P351+P338 VED KONTAKT MED ØYNE: Skyll forsiktig med vann i flere minutter. Fjern eventuelle kontaktlinser dersom dette enkelt lar seg gjøre. Fortsett skyllingen.
 P310 Kontakt umiddelbart et GIFTINFORMASJONSSENTER/en lege.
 P321 Særlig behandling (se på etiketten).
 P361+P364 Tilsølte klær må fjernes straks og vaskes før bruk.
 P405 Oppbevares innelåst.
 P501 Innholdet / emballasjen skal avhendes i henhold til de lokale / regionale / nasjonale / internasjonale forskrifter.

2.3 Andre farer

Resultater av PBT- og vPvB-vurdering

- PBT:** Ikke brukbar.
- vPvB:** Ikke brukbar.

Avsnitt 3: Sammensetning/opplysninger om bestanddeler

3.2 Kjemisk karakterisering: Stoffblandinger

Beskrivelse: Blanding av nedenstående oppførte stoffer med ufarlige tilsetninger.

Farlige innholdsstoffer:

CAS: 50-00-0	formaldehyd	>25-≤50%
EINECS: 200-001-8	Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Skin Corr. 1B, H314; Skin Sens. 1, H317	

Ytterligere informasjoner: Teksten til de fareangivelsene som er inkludert her, kan konsulteres i kapittel 16.

NO
(fortsatt på side 3)

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Avsnitt 4: Førstehjelpstiltak

· **4.1 Beskrivelse av førstehjelpstiltak**

· **Generelle informasjoner:**

Klær som er tilsølt med produktet må fjernes omgående.

Forgiftningssymptomer kan også oppstå etter mange timer. Personer må derfor ha legetilsyn i minst 48 timer etter en ulykke.

Åndedrettsbeskyttelse må først fjernes etter at tilsølte klær er fjernet.

Kunstig åndedrett ved uregelmessig åndedrett eller åndedrettsstillstand.

· **Etter innånding:**

Tilførsel av frisk luft eller surstoff; søk legehjelp.

Ved bevisstløshet lagring og transport i stabil sidestilling.

· **Etter hudkontakt:** Vask straks med vann og sepe og skylld godt etterpå.

· **Etter øyekontakt:** Skyll øynene med åpne øyenlokk i flere minutter under rennende vann og tilkall lege.

· **Etter svelging:**

Søk lege straks.

Drikk rikelig med vann og sørg for frisk luft. Tilkall lege omgående.

· **4.2 De viktigste symptomene og virkningene, både akutte og forsinkede**

Ikke noe mer relevant informasjon tilgjengelig.

· **4.3 Angivelse av om umiddelbar legehjelp og spesialbehandling er nødvendig**

Ikke noe mer relevant informasjon tilgjengelig.

Avsnitt 5: Brannsløkkingstiltak

· **5.1 Sløkkingsmidler**

· **Egnede slukningsmidler:**

CO₂, slukningspulver eller vann i spredt stråle. Større branner bekjempes med vann i spredt stråle eller med skum som er motstandsdyktig mot alkohol.

· **5.2 Særlige farer knyttet til stoffet eller stoffblandingen** Ikke noe mer relevant informasjon tilgjengelig.

· **5.3 Råd til brannmannskaper**

· **Spesielt verneutstyr:** Ta på egnet åndedrettsbeskyttelse.

Avsnitt 6: Tiltak ved utilsiktede utslipp

· **6.1 Personlige forsiktighetsregler, personlig verneutstyr og nødrutiner**

Ta på beskyttelsesdrakt. Hold ubeskyttede personer borte.

· **6.2 Forsiktighetsregler med hensyn til miljø**

Fortynn med rikelig med vann.

La ikke produktet komme ned i kloakk/overflatevann/grunnvann.

· **6.3 Metoder og materialer for oppsamling og rensing**

Ta opp stoffet med væskebindende materiale (sand, kiselgur, syrebindemiddel, universalbindemiddel, sagflis).

Bruk nøytraliseringsmiddel.

Bortskaff kontaminert matereriale som avfall i.h.t. punkt 13.

Sørg for tilstrekkelig ventilasjon.

· **6.4 Henvisning til andre avsnitt**

Informasjoner om sikker håndtering, se kapittel 7.

Informasjoner om personlig beskyttelsesutstyr, se kapittel 8.

Informasjoner om bortskaffelse/deponering, se kapittel 13.

NO

(fortsatt på side 4)

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Avsnitt 7: Håndtering og lagring

· 7.1 Forsiktighetsregler for sikker håndtering

Sørg for god ventilasjon/avsugning på arbeidsplassen.

Beholderne må åpnes og håndteres forsiktig.

Unngå aerosoldannelse.

· **Henvisninger om brann- og eksplosjonsvern:** Hold åndedrettsbeskyttelse i beredskap.

· 7.2 Vilkår for sikker lagring, herunder eventuelle uforenligheter

· Lagring:

· **Krav til lagerrom og beholdere:** Ingen spesielle krav.

· **Informasjoner om felles lagring:** Ikke nødvendig.

· **Ytterligere informasjoner om lagervilkårene:** Hold beholderne tett tillukket.

· **7.3 Særlig(e) sluttanvendelse(r)** Ikke noe mer relevant informasjon tilgjengelig.

Avsnitt 8: Eksponeringskontroll / personlig verneutstyr

· **Ytterligere informasjoner om utforming av tekniske anlegg:** Ingen ytterligere informasjoner, se punkt 7.

· 8.1 Kontrollparametere

· **Komponenter med grenseverdier for arbeidsplass som må overholdes:**

50-00-0 formaldehyd

AG Langtidsverdi: 0,6 mg/m³, 0,5 ppm

Takverdi: 1,2 mg/m³, 1 ppm

A K

· **Ytterligere informasjoner:** Basis: listene som var gyldige ved oppstillingen.

· 8.2 Eksponeringskontroll

· Personlig verneutstyr:

· Generelle verne- og hygienetiltak:

Holdes adskilt fra næringsmidler, drikkevarer og førstoffer.

Fjern omgående forurensede, gjennomvåtede klær.

Vask hendene før arbeidspauser og ved arbeidets slutt.

Beskyttelsesklær må oppbevares adskilt.

Unngå berøring med øynene.

Unngå berøring med øyne og hud.

· Åndedrettsvern:

Ved korttidig eller liten belastning åndedrettsfilterapparat; ved intensiv eller lengre utsetting: bruk omluft-uavhengig åndedrettsbeskyttelsesapparat.

· Håndvern:



Beskyttelseshansker

Hanskematerialet må være ugjennomtrengelig og bestandig overfor produktet /stoffet /blandingen.

På grunn av manglende tester kan det ikke gis noen anbefaling om hanskemateriale for produktet / tilberedningsprosessen/kjemikalieblandingen.

Hanskematerialet velges under hensyntagen til holdbarhetstid, gjennomtrengelighet og degradering.

· **hanskemateriale**

Valget av egnet hanske er ikke bare avhengig av materiale, men også av andre kvalitetskjenner og er forskjellig fra produsent til produsent. Da produktet representerer en sammensetning av flere stoffer, kan holdbarheten av hanskematerialet ikke forhåndsregnes, og denne må testes før bruk.

(fortsatt på side 5)

Sikkerhetsdatablad

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Trykkdato: 30.10.2018

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(fortsatt fra side 4)

- **gjennomtrengingstid for hanskemateriale**
Den nøyaktige holdbarhetstiden må bringes på det rene hos hanskeprodusenten og overholdes.
- **Øyevern:**



Tettsittende vernebrille

Avsnitt 9: Fysiske og kjemiske egenskaper

- **9.1 Opplysninger om grunnleggende fysiske og kjemiske egenskaper**
- **alminnelige opplysninger**

- **Utseende:**

Form: Væske

Farge: Klar

- **Lukt:** Karakteristisk

- **Luktterskel:** Ikke bestemt.

- **pH-verdi ved 20 °C:** 2,8

- **Tilstandsending**

Smeltepunkt/frysepunkt: Ikke bestemt.

Startkokepunkt og kokeområde: >93 °C

- **Flammepunkt:** >60 °C

- **Antennelighet (fast stoff, gass):** Ikke brukbar.

- **Antennelsestemperatur:** 300 °C

- **Nedbrytingstemperatur:** Ikke bestemt.

- **Selvantennelsestemperatur:** Produktet er ikke selvantennelig.

- **Eksplorative egenskaper:** Ikke bestemt.

- **Eksplasjonsgrenser:**

Nedre: 7 Vol %

Øvre: 73 Vol %

- **Damptrykk ved 20 °C:** 23 hPa

- **Tetthet ved 20 °C:** 0,9392 g/cm³

- **Relativ tetthet:** Ikke bestemt.

- **Damptetthet:** Ikke bestemt.

- **Fordampingshastighet:** Ikke bestemt.

- **Løslighet i / blandbarhet med vann:**

Fullstendig blandbar.

- **Fordelingskoeffisient; n-oktanol/vann:** Ikke bestemt.

- **Viskositet:**

Dynamisk: Ikke bestemt.

Kinematisk: Ikke bestemt.

- **Løsningsmiddelandel:**

Organiske løsningsmidler: 32,0 %

Vann: 68,0 %

(fortsatt på side 6)

Sikkerhetsdatablad

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Trykkdato: 30.10.2018

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Handelsnavn: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(fortsatt fra side 5)

VOC (EF)	32,00 %
Andel faste stoffer:	0,0 %
· 9.2 Andre opplysninger	Ikke noe mer relevant informasjon tilgjengelig.

Avsnitt 10: Stabilitet og reaktivitet

- **10.1 Reaktivitet** Ikke noe mer relevant informasjon tilgjengelig.
- **10.2 Kjemisk stabilitet**
- **Termisk spaltning / vilkår som må unngås:** Ingen spaltning ved formålsriktig bruk.
- **10.3 Risiko for farlige reaksjoner** Det kjennes ingen farlige reaksjoner.
- **10.4 Forhold som skal unngås** Ikke noe mer relevant informasjon tilgjengelig.
- **10.5 Uforenlige materialer** Ikke noe mer relevant informasjon tilgjengelig.
- **10.6 Farlige nedbrytingsprodukter** Ingen farlige spaltningsprodukter kjente.

Avsnitt 11: Toksikologiske opplysninger

- **11.1 Opplysninger om toksikologiske virkninger**
- **Akutt giftighet**
Farlig ved svelging.
Giftig ved hudkontakt eller innånding.
- **Klassifiseringsrelevante LD/LC50-verdier:**
- **50-00-0 formaldehyd**
- Oral LD50 >200 mg/kg (rat)
- **Primær irritasjonsvirkning:**
- **Hudetsing/hudirritasjon**
Gir alvorlige etseskader på hud og øyne.
- **Alvorlig øyeskade/øyeirritasjon**
Gir alvorlig øyeskade.
- **Sensibilisering ved innånding eller hudkontakt**
Kan utløse en allergisk hudreaksjon.
- **Informasjon om følgende grupper med potensielle virkninger:**
- **CMR-virkninger (kreftfremkallende virkninger, arvestoffskadelige og reproduksjonsskadelige virkninger)**
- **Arvestoffskadelig virkning på kjønnseller**
Mistenkes å kunne gi genetiske skader.
- **Kreftframkallende egenskap**
Kan forårsake kreft.
- **Reproduksjonstoksisitet** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **STOT – enkelteksponering**
Kan forårsake irritasjon av luftveiene.
- **STOT – gjentatt eksponering** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Aspirasjonsfare** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.

Avsnitt 12: Økologiske opplysninger

- **12.1 Giftighet**
- **Akvatisk toksisitet:** Ikke noe mer relevant informasjon tilgjengelig.
- **12.2 Persistens og nedbrytbarhet** Ikke noe mer relevant informasjon tilgjengelig.
- **12.3 Bioakkumuleringsevne** Ikke noe mer relevant informasjon tilgjengelig.
- **12.4 Mobilitet i jord** Ikke noe mer relevant informasjon tilgjengelig.

(fortsatt på side 7)

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(fortsatt fra side 6)

- **Ytterligere økologiske informasjoner:**
- **Generelle informasjoner:**
Vannfareklasse 2 (D) (Selvklassifisering): farlig for vann
Ikke la stoffet komme ned i grunnvannet, i vassdrag eller i kloakker.
Må ikke komme ufortynnet eller unøytralisert ned i spillvann eller i avløpsgrøft.
Fare for drikkevann allerede ved utstrømning av små mengder i marken.
- **12.5 Resultater av PBT- og vPvB-vurdering**
- **PBT:** Ikke brukbar.
- **vPvB:** Ikke brukbar.
- **12.6 Andre skadevirkninger** Ikke noe mer relevant informasjon tilgjengelig.

Avsnitt 13: Sluttbehandling

- **13.1 Avfallsbehandlingsmetoder**
- **Anbefaling:** *Må ikke bortskaffes sammen med husholdningsavfall. Må ikke komme ned i kloakk.*
- **Ikke rengjort emballasje:**
- **Anbefaling:** *Deponering i henhold til myndighetenes forskrifter.*
- **Anbefalt rengjøringsmiddel:** *Vann, eventuelt med tilsetning av rengjøringsmidler.*

Avsnitt 14: Transportopplysninger

- | | |
|--|---------------------------|
| 14.1 FN-nummer | |
| · ADR, IMDG, IATA | UN2209 |
| 14.2 FN-forsendelsesnavn | |
| · ADR | 2209 FORMALDEHYDLØSNING |
| · IMDG, IATA | FORMALDEHYDE SOLUTION |
| 14.3 Transportfareklasse(r) | |
| · ADR, IMDG, IATA | |
|  | |
| · klasse | 8 Etsende stoffer |
| · Fareseddel | 8 |
| 14.4 Emballasjegruppe | |
| · ADR, IMDG, IATA | III |
| 14.5 Miljøfarer | Ikke brukbar. |
| 14.6 Særlige forsiktighetsregler ved bruk | Advarsel: Etsende stoffer |
| · Kemler-tall: | 80 |
| · EMS-nummer: | F-A,S-B |
| · Stowage Category | A |
| 14.7 Bulktransport i henhold til vedlegg II til MARPOL 73/78 og IBC-regelverket | Ikke brukbar. |

(fortsatt på side 8)

NO

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Handelsnavn: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(fortsatt fra side 7)

· Transport/ytterligere informasjoner:**· ADR****· Begrenset mengde (LQ)**

5L

· Unntatte mengder (EQ)

Kode: E1

Maksimal nettovekt per inneremballasje: 30 ml

Maksimal nettovekt per ytteremballasje: 1000 ml

· Transportkategori

3

· Tunnel restriksjonskode

E

· IMDG**· Limited quantities (LQ)**

5L

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation":

UN 2209 FORMALDEHYDLØSNING, 8, III

Avsnitt 15: Opplysninger om regelverk**· 15.1 Særlige bestemmelser / særskilt lovgivning om sikkerhet, helse og miljø for stoffet eller stoffblandingen****· Nasjonale forskrifter:****· Informasjoner om arbeidsinnskrenkning:**

Arbeidstagere må ikke utsettes for de kreftfremkallende farlige stoffer som er inneholdt i denne blandingen. I enkelte tilfeller kan myndighetene tillate unntak.

· 15.2 Vurdering av kjemikaliesikkerhet En kjemisk sikkerhetsvurdering er ikke utført.**Avsnitt 16: Andre opplysninger**

Opplysningene er basert på vårt kjennskap i dag. De utgjør dog ingen forsikring om produkttegenskaper og er ikke grunnlag for noe kontraktsmessig rettsforhold.

· Relevante satser

H301 Giftig ved svelging.

H311 Giftig ved hudkontakt.

H314 Gir alvorlige etseskader på hud og øyne.

H317 Kan utløse en allergisk hudreaksjon.

H331 Giftig ved innånding.

H341 Mistenkes å kunne gi genetiske skader.

H350 Kan forårsake kreft.

· Forkortelser og akronymer:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Akutt giftighet – Kategori 3

(fortsatt på side 9)

Sikkerhetsdatablad
iflg. forordning (EF) nr. 1907/2006, Artikkel 31

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Acute Tox. 4: Akutt giftighet – Kategori 4
Skin Corr. 1B: Hudetsing/hudirritasjon – Kategori 1B
Eye Dam. 1: Alvorlig øyeskade/øyeirritasjon – Kategori 1
Skin Sens. 1: Hudsensibilisering – Kategori 1
Muta. 2: Skade på arvestoffet i kjønnseller – Kategori 2
Carc. 1B: Kreftframkallende egenskaper – Kategori 1B
STOT SE 3: Giftvirkning på bestemte organer (enkelteksponering) – Kategori 3

NO

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SECÇÃO 1: Identificação da substância/mistura e da sociedade/empresa

- **1.1 Identificador do produto**
- **Nome comercial:** PARAFORMALDEHYDE 32% SOLUTION, EM GRADE
- **Código do produto:** 15714, 15714-S, 15714-1L, 15714-SP
- **1.2 Utilizações identificadas relevantes da substância ou mistura e utilizações desaconselhadas**
Não existe mais nenhuma informação relevante disponível.
- **Utilização da substância / da preparação** Químicos de laboratório
- **1.3 Identificação do fornecedor da ficha de dados de segurança**
- **Fabricante/fornecedor:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Entidade para obtenção de informações adicionais:** Product safety department
- **1.4 Número de telefone de emergência:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECÇÃO 2: Identificação dos perigos

- **2.1 Classificação da substância ou mistura**
- **Classificação em conformidade com o Regulamento (CE) n.º 1272/2008**



GHS06 caveira sobre tóxicas cruzadas

Acute Tox. 3 H311 Tóxico em contacto com a pele.

Acute Tox. 3 H331 Tóxico por inalação.



GHS08 perigo para a saúde

Muta. 2 H341 Suspeito de provocar anomalias genéticas.

Carc. 1B H350 Pode provocar cancro.



GHS05 corrosão

Skin Corr. 1B H314 Provoca queimaduras na pele e lesões oculares graves.

Eye Dam. 1 H318 Provoca lesões oculares graves.



GHS07

Acute Tox. 4 H302 Nocivo por ingestão.

Skin Sens. 1 H317 Pode provocar uma reacção alérgica cutânea.

STOT SE 3 H335 Pode provocar irritação das vias respiratórias.

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- **2.2 Elementos do rótulo**
- **Rotulagem em conformidade com o Regulamento (CE) n.º 1272/2008**
O produto classificou-se e está etiquetado em conformidade com o regulamento CLP.
- **Pictogramas de perigo**



GHS05 GHS06 GHS08

- **Palavra-sinal Perigo**
- **Componentes determinantes para os perigos constantes do rótulo:**
formaldeído
- **Advertências de perigo**
 - H302 Nocivo por ingestão.
 - H311+H331 Tóxico em contacto com a pele ou por inalação.
 - H314 Provoca queimaduras na pele e lesões oculares graves.
 - H317 Pode provocar uma reacção alérgica cutânea.
 - H341 Suspeito de provocar anomalias genéticas.
 - H350 Pode provocar cancro.
 - H335 Pode provocar irritação das vias respiratórias.
- **Recomendações de prudência**
 - P303+P361+P353 SE ENTRAR EM CONTACTO COM A PELE (ou o cabelo): retirar imediatamente toda a roupa contaminada. Enxaguar a pele com água/tomar um duche.
 - P305+P351+P338 SE ENTRAR EM CONTACTO COM OS OLHOS: enxaguar cuidadosamente com água durante vários minutos. Se usar lentes de contacto, retire-as, se tal lhe for possível. Continuar a enxaguar.
 - P310 Contacte imediatamente um CENTRO DE INFORMAÇÃO ANTIVENENOS/médico.
 - P321 Tratamento específico (ver no presente rótulo).
 - P361+P364 Retirar imediatamente a roupa contaminada e lavá-la antes de a voltar a usar.
 - P405 Armazenar em local fechado à chave.
 - P501 Eliminar o conteúdo/recipiente de acordo com a legislação local/regional/nacional/internacional.
- **2.3 Outros perigos**
- **Resultados da avaliação PBT e mPmB**
- **PBT:** Não aplicável.
- **mPmB:** Não aplicável.

SECÇÃO 3: Composição/informação sobre os componentes

- **3.2 Caracterização química: Misturas**
- **Descrição:** Mistura das seguintes substâncias com aditivos não perigosos.

· Substâncias perigosas:

CAS: 50-00-0	formaldeído	>25-≤50%
EINECS: 200-001-8	Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Skin Corr. 1B, H314; Skin Sens. 1, H317	

- **Avisos adicionais:** O texto das indicações de perigo aqui incluído poderá ser consultado no capítulo 16.

PT

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SECÇÃO 4: Medidas de primeiros socorros

· **4.1 Descrição das medidas de primeiros socorros**

· **Indicações gerais:**

O vestuário contaminado com substâncias perigosas deve ser imediatamente removido.

Os sintomas de envenenamento podem surgir apenas após várias horas, por isso é necessária vigilância médica pelo menos 48 horas após o acidente.

Tirar a protecção respiratória apenas depois de ter sido despido o vestuário contaminado.

Em caso de respiração irregular ou paragem da respiração, executar respiração artificial.

· **Em caso de inalação:**

Ar fresco ou entrada de oxigénio; solicitar auxílio médico.

Se a vítima estiver inconsciente, posicioná-la e transportá-la com estabilidade, deitada lateralmente.

· **Em caso de contacto com a pele:** Lavar imediatamente com água e sabão e enxaguar abundantemente.

· **Em caso de contacto com os olhos:**

Enxaguar os olhos durante alguns minutos sob água corrente, mantendo as pálpebras abertas, e consultar o médico.

· **Em caso de ingestão:**

Consultar imediatamente o médico

Beber bastante água e respirar ar fresco. Consultar imediatamente um médico.

· **4.2 Sintomas e efeitos mais importantes, tanto agudos como retardados**

Não existe mais nenhuma informação relevante disponível.

· **4.3 Indicações sobre cuidados médicos urgentes e tratamentos especiais necessários**

Não existe mais nenhuma informação relevante disponível.

SECÇÃO 5: Medidas de combate a incêndios

· **5.1 Meios de extinção**

· **Meios adequados de extinção:**

CO2, pó extintor ou jacto de água. Um incêndio de grandes dimensões deve ser combatido com jacto de água ou espuma resistente ao álcool.

· **5.2 Perigos especiais decorrentes da substância ou mistura**

Não existe mais nenhuma informação relevante disponível.

· **5.3 Recomendações para o pessoal de combate a incêndios**

· **Equipamento especial de protecção:** Colocar máscara de respiração.

SECÇÃO 6: Medidas a tomar em caso de fugas acidentais

· **6.1 Precauções individuais, equipamento de protecção e procedimentos de emergência**

Usar equipamento de protecção. Manter as pessoas desprotegidas afastadas.

· **6.2 Precauções a nível ambiental:**

Diluir em bastante água.

Evitar que penetre na canalização / águas superficiais / águas subterrâneas.

· **6.3 Métodos e materiais de confinamento e limpeza:**

Recolher com produtos que absorvam líquidos (areia, seixos, absorventes universais, serradura).

Aplicar um agente de neutralização.

Eliminar residualmente as substâncias contaminadas como um resíduo segundo o Ponto 13.

Assegurar uma ventilação adequada.

· **6.4 Remissão para outras secções**

Para informações sobre uma manipulação segura, ver o capítulo 7.

Para informações referentes ao equipamento de protecção individual, ver o capítulo 8.

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Para informações referentes à eliminação residual, ver o capítulo 13.

SECÇÃO 7: Manuseamento e armazenagem

- **7.1 Precauções para um manuseamento seguro**
Assegurar uma boa ventilação / exaustão no local de trabalho.
Abrir e manusear o recipiente com cuidado
Evitar a formação de aerossóis.
- **Precauções para prevenir incêndios e explosões:** Manter uma máscara de respiração sempre preparada.
- **7.2 Condições de armazenagem segura, incluindo eventuais incompatibilidades**
- **Armazenagem:**
- **Requisitos para espaços ou contentores para armazenagem:** Sem requisitos especiais.
- **Avisos para armazenagem conjunta:** Não necessário.
- **Outros avisos sobre as condições de armazenagem:** Manter o recipiente hermeticamente fechado.
- **7.3 Utilização(ões) final(is) específica(s)** Não existe mais nenhuma informação relevante disponível.

SECÇÃO 8: Controlo da exposição/Protecção individual

- **Indicações adicionais para concepção de instalações técnicas:** Não existem outras informações, ver ponto 7.
- **8.1 Parâmetros de controlo**

· **Componentes cujo valor do limite de exposição no local de trabalho deve ser monitorizado:**

50-00-0 formaldeído

VLE	Valor limite de exposição – concentração máxima: 0,3 ppm (S); A2; Irritação ocular e do TRS
-----	--

- **Indicações adicionais:** Foram utilizadas como base as listas válidas à data da elaboração.
- **8.2 Controlo da exposição**
- **Equipamento de protecção individual:**
- **Medidas gerais de protecção e higiene:**
Manter afastado de alimentos, bebidas e forragens.
Despir imediatamente a roupa contaminada e embebida.
Lavar as mãos antes das pausas e no fim do trabalho.
Guardar o vestuário de protecção separadamente.
Evitar o contacto com os olhos.
Evitar o contacto com os olhos e com a pele.
- **Protecção respiratória:**
Utilizar uma máscara respiratória se a exposição for reduzida ou durante um curto espaço de tempo; se esta for mais prolongada ou mais intensa, utilizar uma máscara respiratória independente do ar ambiente.
- **Protecção das mãos:**



Luvas de protecção

O material das luvas tem de ser impermeável e resistente ao produto / à substância / preparação.
Uma vez que não foram realizados testes nesta área, não podemos recomendar um determinado tipo de material para as luvas que seja adequado para o produto / a preparação / a mistura de químicos.
Escolher o material das luvas tendo em consideração a durabilidade, a permeabilidade e a degradação.

- **Material das luvas**

A escolha das luvas mais adequadas não depende apenas do material, mas também de outras características qualitativas e varia de fabricante para fabricante. O facto de o produto ser composto por uma variedade de materiais leva a que não seja possível prever a duração dos mesmos e, conseqüentemente, das luvas, sendo assim

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necessário proceder a uma verificação antes da sua utilização.

- **Tempo de penetração no material das luvas**
Deve informar-se sobre a validade exacta das suas luvas junto do fabricante e respeitá-la.
- **Protecção dos olhos:**



Óculos de protecção totalmente fechados

SECÇÃO 9: Propriedades físico-químicas

· 9.1 Informações sobre propriedades físicas e químicas de base

· Informações gerais

· Aspeto:

Forma: Líquido

Cor: Claro

· **Odor:** Característico

· **Limiar olfactivo:** Não classificado.

· **valor pH em 20 °C:** 2,8

· Mudança do estado:

Ponto de fusão/ponto de congelação: Não classificado.

Ponto de ebulição inicial e intervalo de ebulição: >93 °C

· **Ponto de inflamação:** >60 °C

· **Inflamabilidade (sólido, gás):** Não aplicável.

· **Temperatura de ignição:** 300 °C

· **Temperatura de decomposição:** Não classificado.

· **Temperatura de autoignição:** O produto não é auto-inflamável.

· **Propriedades explosivas:** Não classificado.

· Limites de explosão:

Inferior: 7 Vol %

Superior: 73 Vol %

· **Pressão de vapor em 20 °C:** 23 hPa

· **Densidade em 20 °C:** 0,9392 g/cm³

· **Densidade relativa** Não classificado.

· **Densidade de vapor** Não classificado.

· **Taxa de evaporação:** Não classificado.

· Solubilidade em / miscibilidade com água:

Completamente misturável.

· **Coefficiente de partição: n-octanol/água** Não classificado.

· Viscosidade:

Dinâmico: Não classificado.

Cinemático: Não classificado.

· Percentagem de solvente:

Solventes orgânicos: 32,0 %

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Água:	68,0 %
VOC (UE)	32,00 %
Percentagem de substâncias sólidas:	0,0 %
· 9.2 Outras informações	Não existe mais nenhuma informação relevante disponível.

SECÇÃO 10: Estabilidade e reactividade

- **10.1 Reactividade** Não existe mais nenhuma informação relevante disponível.
- **10.2 Estabilidade química**
- **Decomposição térmica / condições a evitar:** Não existe decomposição se usado de acordo com as especificações.
- **10.3 Possibilidade de reações perigosas** Não se conhecem reações perigosas.
- **10.4 Condições a evitar** Não existe mais nenhuma informação relevante disponível.
- **10.5 Materiais incompatíveis:** Não existe mais nenhuma informação relevante disponível.
- **10.6 Produtos de decomposição perigosos:** Não se conhecem produtos de decomposição perigosos.

SECÇÃO 11: Informação toxicológica

- **11.1 Informações sobre os efeitos toxicológicos**
- **Toxicidade aguda**
Nocivo por ingestão.
Tóxico em contacto com a pele ou por inalação.

· **Valores LD/LC50 relevantes para a classificação:****50-00-0 formaldeído**

por via oral | LD50 | >200 mg/kg (rat)

- **Efeito de irritabilidade primário:**
- **Corrosão/irritação cutânea**
Provoca queimaduras na pele e lesões oculares graves.
- **Lesões oculares graves/irritação ocular**
Provoca lesões oculares graves.
- **Sensibilização respiratória ou cutânea**
Pode provocar uma reacção alérgica cutânea.
- **Efeitos CMR (carcinogenicidade, mutagenicidade e efeitos tóxicos na reprodução)**
- **Mutagenicidade em células germinativas**
Suspeito de provocar anomalias genéticas.
- **Carcinogenicidade**
Pode provocar cancro.
- **Toxicidade reprodutiva** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Toxicidade para órgãos-alvo específicos (STOT) - exposição única**
Pode provocar irritação das vias respiratórias.
- **Toxicidade para órgãos-alvo específicos (STOT) - exposição repetida**
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Perigo de aspiração** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.

SECÇÃO 12: Informação ecológica

- **12.1 Toxicidade**
- **Toxicidade aquática:** Não existe mais nenhuma informação relevante disponível.
- **12.2 Persistência e degradabilidade** Não existe mais nenhuma informação relevante disponível.
- **12.3 Potencial de bioacumulação** Não existe mais nenhuma informação relevante disponível.

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- **12.4 Mobilidade no solo** Não existe mais nenhuma informação relevante disponível.
- **Outras indicações ecológicas:**
- **Indicações gerais:**
 - Classe de perigo para a água 2 (D) (auto-classificação): perigoso para a água.
 - Não deixar chegar às águas subterrâneas, aos cursos de água nem à canalização.
 - Substâncias concentradas, ou seja não neutralizadas, não podem chegar aos esgotos nem às águas.
 - Perigo de poluição da água potável mesmo se forem derramadas quantidades muito pequenas no subsolo.
- **12.5 Resultados da avaliação PBT e mPmB**
- **PBT:** Não aplicável.
- **mPmB:** Não aplicável.
- **12.6 Outros efeitos adversos** Não existe mais nenhuma informação relevante disponível.

SECÇÃO 13: Considerações relativas à eliminação

- **13.1 Métodos de tratamento de resíduos**
- **Recomendação:** Não se pode eliminar juntamente com o lixo doméstico. Não permita que chegue à canalização.
- **Embalagens contaminadas:**
- **Recomendação:** Eliminação residual conforme o regulamento dos serviços públicos.
- **Meio de limpeza recomendado:** Água, eventualmente com adição de produtos de limpeza

SECÇÃO 14: Informações relativas ao transporte

- | | |
|--|--|
| · 14.1 Número ONU
· ADR, IMDG, IATA | UN2209 |
| · 14.2 Designação oficial de transporte da ONU
· ADR
· IMDG, IATA | 2209 FORMALDEÍDO EM SOLUÇÃO
FORMALDEHYDE SOLUTION |
| · 14.3 Classes de perigo para efeitos de transporte
· ADR, IMDG, IATA | |
|  | |
| · Classe
· Rótulo | 8 Matérias corrosivas
8 |
| · 14.4 Grupo de embalagem
· ADR, IMDG, IATA | III |
| · 14.5 Perigos para o ambiente: | Não aplicável. |
| · 14.6 Precauções especiais para o utilizador
· Nº Kemler:
· Nº EMS:
· Stowage Category | Atenção: Matérias corrosivas
80
F-A,S-B
A |
| · 14.7 Transporte a granel em conformidade com o anexo II da Convenção MARPOL e o Código IBC | Não aplicável. |

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· **Transporte/outras informações:**· **ADR**· **Quantidades Limitadas (LQ)**

5L

· **Quantidades exceptuadas (EQ)**

Código: E1

Quantidade líquida máxima por embalagem interior: 30 ml

Quantidade líquida máxima por embalagem exterior: 1000 ml

· **Categoria de transporte**

3

· **Código de restrição em túneis**

E

· **IMDG**· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":**

UN 2209 FORMALDEÍDO EM SOLUÇÃO, 8, III

SECÇÃO 15: Informação sobre regulamentação

· **15.1 Regulamentação/legislação específica para a substância ou mistura em matéria de saúde, segurança e ambiente**

· **Diretiva 2012/18/UE**· **Substâncias perigosas designadas - ANEXO I Nenhum dos componentes se encontra listado.**· **Categoria "Seveso" H2 TOXICIDADE AGUDA**· **Quantidades-limiar (em toneladas), para a aplicação de requisitos de nível inferior 50 t**· **Quantidades-limiar (em toneladas), para a aplicação de requisitos de nível superior 200 t**· **Regulamento (CE) n.º 1907/2006 ANEXO XVII Condições de limitação: 3, 28**· **Disposições nacionais:**· **Avisos para limitação da exposição no local de trabalho:**

Os trabalhadores não devem ser expostos às substâncias perigosas contidas nesta preparação que podem causar cancro. Em casos isolados os serviços públicos podem permitir excepções.

· **15.2 Avaliação da segurança química: Não foi realizada nenhuma Avaliação de Segurança Química.****SECÇÃO 16: Outras informações**

As informações fornecidas baseiam-se no estado actual dos nossos conhecimentos, embora não representem uma garantia das propriedades do produto e não fundamentam uma relação contratual.

· **Frases relevantes**

H301 Tóxico por ingestão.

H311 Tóxico em contacto com a pele.

H314 Provoca queimaduras na pele e lesões oculares graves.

H317 Pode provocar uma reacção alérgica cutânea.

H331 Tóxico por inalação.

H341 Suspeito de provocar anomalias genéticas.

H350 Pode provocar cancro.

· **Abreviaturas e acrónimos:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

(continuação na página 9)

Ficha de dados de segurança
em conformidade com 1907/2006/CE, Artigo 31º

data da impressão 30.10.2018

Revisão: 30.10.2018

Nome comercial: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(continuação da página 8)

GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 3: Toxicidade aguda – Categoria 3
Acute Tox. 4: Toxicidade aguda – Categoria 4
Skin Corr. 1B: Corrosão/irritação cutânea – Categoria 1B
Eye Dam. 1: Lesões oculares graves/irritação ocular – Categoria 1
Skin Sens. 1: Sensibilização cutânea – Categoria 1
Muta. 2: Mutagenicidade em células germinativas – Categoria 2
Carc. 1B: Carcinogenicidade – Categoria 1B
STOT SE 3: Toxicidade para órgãos-alvo específicos (exposição única) – Categoria 3

PT

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 30.10.2018

Revisión: 30.10.2018

SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

· 1.1 Identificador del producto

· **Nombre comercial:** *PARAFORMALDEHYDE 32% SOLUTION, EM GRADE*

· **Número del artículo:** 15714, 15714-S, 15714-1L, 15714-SP

· **1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados**
No existen más datos relevantes disponibles.

· **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio

· 1.3 Datos del proveedor de la ficha de datos de seguridad

· **Fabricante/distribuidor:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: sgkcck@aol.com

www.emsdiasum.com

Aname

C/ Perez Galdos no. 2

28693 Quijorna

Madrid, Spain

Tel: +34.91.816.89.50

Fax: +34.91.816.85.94

email: ventas@aname.es

· **Área de información:** Product safety department

· 1.4 Teléfono de emergencia:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SECCIÓN 2: Identificación de los peligros

· 2.1 Clasificación de la sustancia o de la mezcla

· **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS06 calavera y tibias cruzadas

Acute Tox. 3 H311 Tóxico en contacto con la piel.

Acute Tox. 3 H331 Tóxico en caso de inhalación.



GHS08 peligro para la salud

Muta. 2 H341 Se sospecha que provoca defectos genéticos.

Carc. 1B H350 Puede provocar cáncer.



GHS05 corrosión

Skin Corr. 1B H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

Eye Dam. 1 H318 Provoca lesiones oculares graves.

(se continua en página 2)

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Nombre comercial: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

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GHS07

Acute Tox. 4 H302 Nocivo en caso de ingestión.
Skin Sens. 1 H317 Puede provocar una reacción alérgica en la piel.
STOT SE 3 H335 Puede irritar las vías respiratorias.

· **2.2 Elementos de la etiqueta**

· **Etiquetado con arreglo al Reglamento (CE) n° 1272/2008**

El producto se ha clasificado y etiquetado de conformidad con el reglamento CLP.

· **Pictogramas de peligro**



GHS05 GHS06 GHS08

· **Palabra de advertencia Peligro**

· **Componentes peligrosos a indicar en el etiquetaje:**

formaldehído

· **Indicaciones de peligro**

H302 Nocivo en caso de ingestión.
H311+H331 Tóxico en contacto con la piel o si se inhala.
H314 Provoca quemaduras graves en la piel y lesiones oculares graves.
H317 Puede provocar una reacción alérgica en la piel.
H341 Se sospecha que provoca defectos genéticos.
H350 Puede provocar cáncer.
H335 Puede irritar las vías respiratorias.

· **Consejos de prudencia**

P303+P361+P353 EN CASO DE CONTACTO CON LA PIEL (o el pelo): Quitar inmediatamente todas las prendas contaminadas. Aclararse la piel con agua/ducharse.
P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando.
P310 Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA/médico.
P321 Se necesita un tratamiento específico (ver en esta etiqueta).
P361+P364 Quitar inmediatamente todas las prendas contaminadas y lavarlas antes de volver a usarlas.
P405 Guardar bajo llave.
P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

· **2.3 Otros peligros**

· **Resultados de la valoración PBT y mPmB**

· **PBT:** No aplicable.
· **mPmB:** No aplicable.

SECCIÓN 3: Composición/información sobre los componentes

· **3.2 Caracterización química: Mezclas**

· **Descripción:** Mezcla formada por las sustancias especificadas a continuación con adiciones no peligrosas.

· **Componentes peligrosos:**

CAS: 50-00-0	formaldehído	>25-≤50%
EINECS: 200-001-8	Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Muta. 2, H341; Carc. 1B, H350; Skin Corr. 1B, H314; Skin Sens. 1, H317	

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Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

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· **Indicaciones adicionales:** El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

SECCIÓN 4: Primeros auxilios

· 4.1 Descripción de los primeros auxilios

· Instrucciones generales:

Quitarse de inmediato toda prenda contaminada con el producto.

Los síntomas de intoxicación pueden presentarse después de muchas horas, por lo que se requiere una supervisión médica durante un mínimo de 48 horas después del accidente.

Antes de quitarse la protección respiratoria, quítese la ropa contaminada.

En caso de respiración irregular o apnea (paro respiratorio), hágase la respiración artificial.

· En caso de inhalación del producto:

Suministrar aire fresco u oxígeno; solicitar ayuda médica.

Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.

· En caso de contacto con la piel: Lavar inmediatamente con agua y jabón y enjuagar bien.

· En caso de con los ojos:

Limpia los ojos abiertos durante varios minutos con agua corriente y consultar un médico.

· En caso de ingestión:

Consultar inmediatamente un médico.

Beber mucha agua a respirar aire fresco. Solicitar asistencia médica inmediatamente.

· 4.2 Principales síntomas y efectos, agudos y retardados No existen más datos relevantes disponibles.

· 4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente No existen más datos relevantes disponibles.

SECCIÓN 5: Medidas de lucha contra incendios

· 5.1 Medios de extinción

· Sustancias extintoras apropiadas:

CO₂, polvo extintor o chorro de agua rociada. Combatir incendios mayores con chorro de agua rociada o espuma resistente al alcohol.

· 5.2 Peligros específicos derivados de la sustancia o la mezcla No existen más datos relevantes disponibles.

· 5.3 Recomendaciones para el personal de lucha contra incendios

· Equipo especial de protección: Colocarse la protección respiratoria.

SECCIÓN 6: Medidas en caso de vertido accidental

· 6.1 Precauciones personales, equipo de protección y procedimientos de emergencia

Llevar puesto equipo de protección. Mantener alejadas las personas sin protección.

· 6.2 Precauciones relativas al medio ambiente:

Diluir con mucha agua.

Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.

· 6.3 Métodos y material de contención y de limpieza:

Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).

Utilizar un neutralizador.

Desechar el material contaminado como vertido según ítem 13.

Asegurar suficiente ventilación.

· 6.4 Referencia a otras secciones

Ver capítulo 7 para mayor información sobre una manipulación segura.

Ver capítulo 8 para mayor información sobre el equipo personal de protección.

(se continua en página 4)

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Para mayor información sobre cómo desechar el producto, ver capítulo 13.

SECCIÓN 7: Manipulación y almacenamiento

- **7.1 Precauciones para una manipulación segura**
*Asegurar suficiente ventilación /aspiración en el puesto de trabajo.
 Abrir y manejar el recipiente con cuidado.
 Evitar la formación de aerosoles.*
- **Prevención de incendios y explosiones:** *Tener preparados los aparatos respiratorios.*
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** *No se requieren medidas especiales.*
- **Normas en caso de un almacenamiento conjunto:** *No es necesario.*
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**
Mantener el recipiente cerrado herméticamente.
- **7.3 Usos específicos finales** *No existen más datos relevantes disponibles.*

SECCIÓN 8: Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**
Sin datos adicionales, ver punto 7.

- **8.1 Parámetros de control**

- **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**

50-00-0 formaldehído

LEP	Valor de corta duración: 0,74 mg/m ³ , 0,6 ppm Valor de larga duración: 0,37 mg/m ³ , 0,3 ppm CIB, Sen, s
-----	---

- **Indicaciones adicionales:** *Como base se han utilizado las listas vigentes en el momento de la elaboración.*
- **8.2 Controles de la exposición**
- **Equipo de protección individual:**
- **Medidas generales de protección e higiene:**
*Mantener alejado de alimentos, bebidas y alimentos para animales.
 Quitarse de inmediato la ropa ensuciada o impregnada.
 Lavarse las manos antes de las pausas y al final del trabajo.
 Guardar la ropa protectora por separado.
 Evitar el contacto con los ojos.
 Evitar el contacto con los ojos y la piel.*
- **Protección respiratoria:**
Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.
- **Protección de manos:**



Guantes de protección

*El material del guante deberá ser impermeable y resistente al producto / substancia / preparado.
 Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.
 Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.*

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· **Material de los guantes**

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

· **Tiempo de penetración del material de los guantes**

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

· **Protección de ojos:**



Gafas de protección herméticas

SECCIÓN 9: Propiedades físicas y químicas

· **9.1 Información sobre propiedades físicas y químicas básicas**

· **Datos generales**

· **Aspecto:**

Forma: Líquido

Color: Claro

· **Olor:** Característico

· **Umbral olfativo:** No determinado.

· **valor pH a 20 °C:** 2,8

· **Cambio de estado**

Punto de fusión/punto de congelación: Indeterminado.

Punto inicial de ebullición e intervalo de ebullición: >93 °C

· **Punto de inflamación:** >60 °C

· **Inflamabilidad (sólido, gas):** No aplicable.

· **Temperatura de ignición:** 300 °C

· **Temperatura de descomposición:** No determinado.

· **Temperatura de auto-inflamación:** El producto no es autoinflamable.

· **Propiedades explosivas:** No determinado.

· **Límites de explosión:**

Inferior: 7 Vol %

Superior: 73 Vol %

· **Presión de vapor a 20 °C:** 23 hPa

· **Densidad a 20 °C:** 0,9392 g/cm³

· **Densidad relativa** No determinado.

· **Densidad de vapor** No determinado.

· **Tasa de evaporación:** No determinado.

· **Solubilidad en / miscibilidad con agua:**

Completamente mezclable.

· **Coefficiente de reparto: n-octanol/agua:** No determinado.

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Ficha de datos de seguridad

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Revisión: 30.10.2018

Nombre comercial: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

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· Viscosidad:	
Dinámica:	No determinado.
Cinemática:	No determinado.
· Concentración del disolvente:	
Disolventes orgánicos:	32,0 %
Agua:	68,0 %
VOC (CE)	32,00 %
· Contenido de cuerpos sólidos:	0,0 %
· 9.2 Otros datos	No existen más datos relevantes disponibles.

SECCIÓN 10: Estabilidad y reactividad

- **10.1 Reactividad** No existen más datos relevantes disponibles.
- **10.2 Estabilidad química**
- **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.
- **10.3 Posibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.
- **10.4 Condiciones que deben evitarse** No existen más datos relevantes disponibles.
- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**

- **Toxicidad aguda**

Nocivo en caso de ingestión.

Tóxico en contacto con la piel o si se inhala.

- **Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:**

50-00-0 formaldehído

Oral	LD50	>200 mg/kg (rat)
------	------	------------------

- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas**
Provoca quemaduras graves en la piel y lesiones oculares graves.
- **Lesiones o irritación ocular graves**
Provoca lesiones oculares graves.
- **Sensibilización respiratoria o cutánea**
Puede provocar una reacción alérgica en la piel.
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**
Se sospecha que provoca defectos genéticos.
- **Carcinogenicidad**
Puede provocar cáncer.
- **Toxicidad para la reproducción** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**
Puede irritar las vías respiratorias.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

(se continua en página 7)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

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Revisión: 30.10.2018

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· **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**
 Nivel de riesgo para el agua 2 (autoclasiificación): peligroso para el agua
 No dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.
 En estado no diluido o no neutralizado, no verter en el alcantarillado o en otros sistemas de desagüe.
 Una cantidad mínima vertida en el subsuelo ya representa un peligro para el agua potable.
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.
- **Producto de limpieza recomendado:** Agua, eventualmente añadiendo productos de limpieza.

SECCIÓN 14: Información relativa al transporte

- **14.1 Número ONU**
- **ADR, IMDG, IATA** UN2209
- **14.2 Designación oficial de transporte de las Naciones Unidas**
- **ADR** 2209 FORMALDEHÍDO EN SOLUCIÓN
- **IMDG, IATA** FORMALDEHYDE SOLUTION
- **14.3 Clase(s) de peligro para el transporte**
- **ADR, IMDG, IATA**
-
- **Clase** 8 Materias corrosivas
- **Etiqueta** 8
- **14.4 Grupo de embalaje**
- **ADR, IMDG, IATA** III
- **14.5 Peligros para el medio ambiente:** No aplicable.

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Ficha de datos de seguridad

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Revisión: 30.10.2018

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· 14.6 Precauciones particulares para los usuarios	Atención: <i>Materias corrosivas</i>
· Número Kemler:	80
· Número EMS:	F-A,S-B
· Stowage Category	A
· 14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC	<i>No aplicable.</i>
· Transporte/datos adicionales:	
· ADR	
· Cantidades limitadas (LQ)	5L
· Cantidades exceptuadas (EQ)	Código: E1 Cantidad neta máxima por envase interior: 30 ml Cantidad neta máxima por embalaje exterior: 1000 ml
· Categoría de transporte	3
· Código de restricción del túnel	E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· "Reglamentación Modelo" de la UNECE:	UN 2209 FORMALDEHÍDO EN SOLUCIÓN, 8, III

SECCIÓN 15: Información reglamentaria

- **15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla**
- **Directiva 2012/18/UE**
- **Sustancias peligrosas nominadas - ANEXO I** ninguno de los componentes está incluido en una lista
- **Categoría Seveso H2 TOXICIDAD AGUDA**
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior** 50 t
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior** 200 t
- **REGLAMENTO (CE) n° 1907/2006 ANEXO XVII** Restricciones: 3, 28
- **Disposiciones nacionales:**
- **Indicaciones sobre las limitaciones de trabajo:**
Los empleados no deben exponerse a las sustancias cancerígenas contenidas en el producto. En casos aislados las autoridades pueden hacer excepciones.
- **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

- **Frases relevantes**
- H301 Tóxico en caso de ingestión.
- H311 Tóxico en contacto con la piel.
- H314 Provoca quemaduras graves en la piel y lesiones oculares graves.
- H317 Puede provocar una reacción alérgica en la piel.
- H331 Tóxico en caso de inhalación.

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H341 Se sospecha que provoca defectos genéticos.

H350 Puede provocar cáncer.

· Abreviaturas y acrónimos:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Toxicidad aguda – Categoría 3

Acute Tox. 4: Toxicidad aguda – Categoría 4

Skin Corr. 1B: Corrosión o irritación cutáneas – Categoría 1B

Eye Dam. 1: Lesiones oculares graves o irritación ocular – Categoría 1

Skin Sens. 1: Sensibilización cutánea – Categoría 1

Muta. 2: Mutagenicidad en células germinales – Categoría 2

Carc. 1B: Carcinogenicidad – Categoría 1B

STOT SE 3: Toxicidad específica en determinados órganos (exposición única) – Categoría 3

Säkerhetsdatablad

Enligt 1907/2006/EG, Artikel 31

Datum för utskrift: 30.10.2018

Omarbetad: 30.10.2018

AVSNITT 1: Namnet på ämnet/blandningen och bolaget/företaget

- **1.1 Produktbeteckning**
- **Handelsnamn: PARAFORMALDEHYDE 32% SOLUTION, EM GRADE**
- **Artikelnummer: 15714, 15714-S, 15714-1L, 15714-SP**
- **1.2 Relevanta identifierade användningar av ämnet eller blandningen och användningar som det avråds från**
Ingen ytterligare relevant information finns till förfogande.
- **Ämnets användning / tillredningen** Laboratoriekemikalier
- **1.3 Närmare upplysningar om den som tillhandahåller säkerhetsdatablad**
- **Tillverkare/leverantör:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- **Område där upplysningar kan inhämtas:** Product safety department
- **1.4 Telefonnummer för nödsituationer:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

AVSNITT 2: Farliga egenskaper

- **2.1 Klassificering av ämnet eller blandningen**
- **Klassificering enligt förordning (EG) nr 1272/2008**



GHS06 dödsdåd med korsande benknötar

Acute Tox. 3 H311 Giftigt vid hudkontakt.

Acute Tox. 3 H331 Giftigt vid inandning.



GHS08 hälsofara

Muta. 2 H341 Misstänks kunna orsaka genetiska defekter.

Carc. 1B H350 Kan orsaka cancer.



GHS05 frätande

Skin Corr. 1B H314 Orsakar allvarliga frätskador på hud och ögon.

Eye Dam. 1 H318 Orsakar allvarliga ögonskador.



GHS07

Acute Tox. 4 H302 Skadligt vid förtäring.

Skin Sens. 1 H317 Kan orsaka allergisk hudreaktion.

STOT SE 3 H335 Kan orsaka irritation i luftvägarna.

- **2.2 Märkningsuppgifter**
- **Märkning enligt förordning (EG) nr 1272/2008** Produkten är klassificerad och märkt enligt CLP-förordningen.

(Fortsättning på sida 2)

Säkerhetsdatablad

Enligt 1907/2006/EG, Artikel 31

Datum för utskrift: 30.10.2018

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(Fortsättning från sida 1)

· Faropiktogram

GHS05 GHS06 GHS08

· Signalord Fara**· Riskbestämmande komponenter för etikettering:**

formaldehyd

· Faroangivelser

- H302 Skadligt vid förtäring.
 H311+H331 Giftigt vid hudkontakt eller förtäring.
 H314 Orsakar allvarliga frätskador på hud och ögon.
 H317 Kan orsaka allergisk hudreaktion.
 H341 Misstänks kunna orsaka genetiska defekter.
 H350 Kan orsaka cancer.
 H335 Kan orsaka irritation i luftvägarna.

· Skyddsangivelser

- P303+P361+P353 VID HUDKONTAKT (även håret): Ta omedelbart av alla nedstänkta kläder. Skölj huden med vatten/duscha.
 P305+P351+P338 VID KONTAKT MED ÖGONEN: Skölj försiktigt med vatten i flera minuter. Ta ur eventuella kontaktlinser om det går lätt. Fortsätt att skölja.
 P310 Kontakta genast GIFTINFORMATIONSCENTRALEN/läkare.
 P321 Särskild behandling (se på etiketten).
 P361+P364 Ta omedelbart av alla nedstänkta kläder och tvätta dem innan de används igen.
 P405 Förvaras inlåst.
 P501 Innehållet / behållaren avfallshanteras enligt lokala / regionala / nationella / internationella föreskrifter.

· 2.3 Andra faror**· Resultat av PBT- och vPvB-bedömningen**

- **PBT:** Ej användbar.
 · **vPvB:** Ej användbar.

AVSNITT 3: Sammansättning/information om beståndsdelar**· 3.2 Kemisk karakterisering: Blandningar**

· **Beskrivning:** Blandning bestående av nedan upplistade ämnen med ofarliga tillsatser.

· Farliga ingredienser:

CAS: 50-00-0	formaldehyd	>25-≤50%
EINECS: 200-001-8	☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ Muta. 2, H341; Carc. 1B, H350; ☠ Skin Corr. 1B, H314; ☠ Skin Sens. 1, H317	

· **Ytterligare hänvisningar:** De angivna farohänvisningarnas ordalydelse framgår av kapitel 16.

AVSNITT 4: Åtgärder vid första hjälpen**· 4.1 Beskrivning av åtgärder vid första hjälpen****· Allmänna hänvisningar:**

Klädesplagg som förorenats med produkten skall omedelbart avlägsnas.
 Förgiftningssymptom kan uppträda först efter många timmar. Av denna anledning krävs läkarövervakning i minst 48 timmar efter ett olycksfall.

(Fortsättning på sida 3)

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(Fortsättning från sida 2)

Ta inte bort andningsskyddet förrän förorenade klädesplagg har avlägsnats.
Vid oregelbunden andning eller andningsstillestånd - ge konstgjord andning.

- **Vid inandning:**

Friskluft- eller syretillförsel; tillkalla läkarhjälp.

Vid medvetslöshet lägg och transportera patient stabilt i framstupa sidoläge.

- **Vid kontakt med huden:** Tvätta omedelbart med vatten och tvål och spola därefter noggrant.

- **Vid kontakt med ögonen:** Spola ögonen öppna i flera minuter under rinnande vatten och kontakta läkare.

- **Vid förtäring:**

Kontakta läkare omedelbart.

Drick rikligt med vatten. Tillför frisk luft. Kontakta läkare omedelbart.

- **4.2 De viktigaste symptomen och effekterna, både akuta och fördröjda**

Ingen ytterligare relevant information finns till förfogande.

- **4.3 Angivande av omedelbar medicinsk behandling och särskild behandling som eventuellt krävs**

Ingen ytterligare relevant information finns till förfogande.

AVSNITT 5: Brandbekämpningsåtgärder

- **5.1 Släckmedel**

- **Lämpliga släckningsmedel:**

CO₂, släckningspulver eller spridd vattenstråle. Större bränder skall bekämpas med spridd vattenstråle eller alkoholbeständig skum.

- **5.2 Särskilda faror som ämnet eller blandningen kan medföra**

Ingen ytterligare relevant information finns till förfogande.

- **5.3 Råd till brandbekämpningspersonal**

- **Speciell skyddsutrustning:** Använd andningsskyddsutrustning.

AVSNITT 6: Åtgärder vid oavsiktliga utsläpp

- **6.1 Personliga skyddsåtgärder, skyddsutrustning och åtgärder vid nödsituationer**

Använd skyddsutrustning. Håll oskyddade personer på avstånd.

- **6.2 Miljöskyddsåtgärder:**

Blanda ut med mycket vatten.

Förhindra produkten att tränga ner i avloppsnät/ytvatten/grundvatten.

- **6.3 Metoder och material för inneslutning och sanering:**

Sug upp med vätskebindande material (sand, kiselgur, syrabindemedel, universalbindemedel, sågspån).

Använd neutraliseringsmedel.

Omhänderta förorenat material som avfall enligt punkt 13.

Se till att ventilationen är tillräcklig.

- **6.4 Hänvisning till andra avsnitt**

Information beträffande säker hantering se kapitel 7.

Information beträffande personlig skyddsutrustning se kapitel 8.

Information beträffande avfallshantering se kapitel 13.

AVSNITT 7: Hantering och lagring

- **7.1 Försiktighetsmått för säker hantering**

Sörj för god ventilation/utsug på arbetsplatsen.

Öppna behållaren försiktigt och hantera den varsamt.

Undvik bildning av aerosol.

- **Hänvisningar beträffande brand- och explosionsskydd:** Håll andningsskyddsutrustning i beredskap.

(Fortsättning på sida 4)

Säkerhetsdatablad

Enligt 1907/2006/EG, Artikel 31

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(Fortsättning från sida 3)

- **7.2 Förhållanden för säker lagring, inklusive eventuell oförenlighet**
- **Lagring:**
- **Krav på lagerutrymmen och behållare:** Inga speciella krav.
- **Hänvisningar beträffande sammanlagring:** Erfordras ej.
- **Ytterligare uppgifter till lagringsvillkoren:** Förvara behållaren tätt tillsluten.
- **7.3 Specifik slutanvändning** Ingen ytterligare relevant information finns till förfogande.

AVSNITT 8: Begränsning av exponeringen/personligt skydd

- **Ytterligare hänvisningar beträffande utformning av tekniska anläggningar:** Inga övriga uppgifter, se punkt 7.

· 8.1 Kontrollparametrar

- **Ämnen med yrkeshygieniska gränsvärden som bör övervakas:**

50-00-0 formaldehyd

OEL	Korttidsvärde: 0,74 mg/m ³ , 0,6 ppm
	Nivågränsvärde: 0,37 mg/m ³ , 0,3 ppm
	C, H, S

- **Ytterligare hänvisningar:** De vid framställningen gällande listorna har använts som utgångspunkt.
- **8.2 Begränsning av exponeringen**
- **Personlig skyddsutrustning:**
- **Allmänna skydds- och hygienåtgärder:**
- Undvik kontakt med livsmedel, drycker och fodermedel.
- Nedsmutsade, indränkta klädesplagg skall omedelbart tas av.
- Tvätta händerna före raster och efter arbetet.
- Skyddsdräkter förvaras separat.
- Undvik kontakt med ögonen.
- Undvik kontakt med ögonen och huden.
- **Andningsskydd:**
- Vid kortvarig eller ringa belastning - använd andningsfilterutrustning; vid intensiv resp. längre exponering - använd andningsskyddsutrustning som är oberoende av omgivningsluften.
- **Handskydd:**



Skyddshandskar

Handskmaterialet måste vara tätt och beständigt mot produkt/ämne/tillredning.
Handskmaterialrekommendationer kan inte ges för produkt/tillredning/kemikalielösning, då inga tester genomförts.
Val av handskmaterial beaktande penetrationstider, permeationskvoter och degradation.

· **Handskmaterial**

Val av lämplig handske är inte enbart beroende av material utan även av andra kvalitetskriterier och varierar från en tillverkare till nästa. Då produkten bereds av flera material, kan handskmaterialets beständighet inte förutses och måste därför kontrolleras före användningen.

· **Handskmaterialets penetreringstid**

Exakt penetrationstid fastställs av skyddshandskarnas tillverkare och skall beaktas.

(Fortsättning på sida 5)

Säkerhetsdatablad

Enligt 1907/2006/EG, Artikel 31

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(Fortsättning från sida 4)

Ögonskydd:

Tättslutande skyddsglasögon

AVSNITT 9: Fysikaliska och kemiska egenskaper**9.1 Information om grundläggande fysikaliska och kemiska egenskaper****Allmänna uppgifter****Utseende:**

Form:	Vätska
Färg:	Klar
Lukt:	Karakteristisk
Luktröskel:	Ej bestämd.

pH-värde vid 20 °C: 2,8**Tillståndsändring**

Smältpunkt/frys punkt:	Ej bestämd.
Initial kokpunkt och kokpunktsintervall:	>93 °C

Flampunkt: >60 °C**Brandfarlighet (fast form, gas):** Ej användbar.**Tändtemperatur:** 300 °C**Sönderfallstemperatur:** Ej bestämd.**Självantändningstemperatur:** Produkten är ej självantändande.**Explosiva egenskaper:** Ej bestämd.**Explosionsgränser:**

Nedre:	7 Vol %
Övre:	73 Vol %

Ångtryck vid 20 °C: 23 hPa**Densitet vid 20 °C:** 0,9392 g/cm³**Relativ densitet:** Ej bestämd.**Ångdensitet:** Ej bestämd.**Avdunstningshastighet:** Ej bestämd.**Löslighet i / blandbarhet med****Vatten:** Fullständigt blandbar.**Fördelningskoefficient: n-oktanol/vatten:** Ej bestämd.**Viskositet:**

Dynamisk:	Ej bestämd.
Kinematisk:	Ej bestämd.

Lösningsmedelhalt:

Organiska lösningsmedel:	32,0 %
Vatten:	68,0 %
VOC (EG)	32,00 %

Andel av fasta partiklar: 0,0 %

(Fortsättning på sida 6)

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(Fortsättning från sida 5)

· 9.2 Annan information

Ingen ytterligare relevant information finns till förfogande.

AVSNITT 10: Stabilitet och reaktivitet

- **10.1 Reaktivitet** Ingen ytterligare relevant information finns till förfogande.
- **10.2 Kemisk stabilitet**
- **Termisk sönderdelning / förhållanden som bör undvikas:** Inget sönderfall vid ändamålsenlig användning.
- **10.3 Risken för farliga reaktioner** Inga farliga reaktioner kända.
- **10.4 Förhållanden som ska undvikas** Ingen ytterligare relevant information finns till förfogande.
- **10.5 Oförenliga material:** Ingen ytterligare relevant information finns till förfogande.
- **10.6 Farliga sönderdelningsprodukter:** Inga farliga sönderfallsprodukter kända.

AVSNITT 11: Toxikologisk information

- **11.1 Information om de toxikologiska effekterna**
- **Akut toxicitet**
Skadligt vid förtäring.
Giftigt vid hudkontakt eller förtäring.

· Klassificeringsrelevanta LD/LC50-värden:**50-00-0 formaldehyd**

Oral | LD50 | >200 mg/kg (rat)

- **Primär retningseffekt:**
- **Frätande/irriterande på huden**
Orsakar allvarliga frätskador på hud och ögon.
- **Allvarlig ögonskada/ögonirritation**
Orsakar allvarliga ögonskador.
- **Luftvägs-/hudsensibilisering**
Kan orsaka allergisk hudreaktion.
- **CMR-effekter (cancerframkallande, mutagena och reproduktionstoxiska egenskaper)**
- **Mutagenitet i könsceller**
Misstänks kunna orsaka genetiska defekter.
- **Cancerogenitet**
Kan orsaka cancer.
- **Reproduktionstoxicitet**
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Specifik organtoxicitet – enstaka exponering**
Kan orsaka irritation i luftvägarna.
- **Specifik organtoxicitet – upprepad exponering**
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Fara vid aspiration** Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.

AVSNITT 12: Ekologisk information

- **12.1 Toxicitet**
- **Akvatisk toxicitet:** Ingen ytterligare relevant information finns till förfogande.
- **12.2 Persistens och nedbrytbarhet** Ingen ytterligare relevant information finns till förfogande.
- **12.3 Bioackumuleringsförmåga** Ingen ytterligare relevant information finns till förfogande.
- **12.4 Rörlighet i jord** Ingen ytterligare relevant information finns till förfogande.

(Fortsättning på sida 7)

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(Fortsättning från sida 6)

- **Ytterligare ekologiska hänvisningar:**
- **Allmänna hänvisningar:**
 Vattenföroreningsklass 2 (Självutvärdering): risk för vattenförorening.
 Låt ej tränga ner i grundvatten, vattendrag eller i avloppsnätet.
 Får ej hamna i avloppsvatten eller uppsamlingsdike i outspätt resp. oneutraliserat tillstånd.
 Risk för förorening av dricksvattnet redan när små mängder tränger ner i marken.
- **12.5 Resultat av PBT- och vPvB-bedömningen**
- **PBT:** Ej användbar.
- **vPvB:** Ej användbar.
- **12.6 Andra skadliga effekter** Ingen ytterligare relevant information finns till förfogande.

AVSNITT 13: Avfallshantering

- **13.1 Avfallsbehandlingsmetoder**
- **Rekommendation:** Får inte deponeras ihop med hushållsavfall. Får inte tömmas i avloppsnätet.
- **Ej rengjorda förpackningar:**
- **Rekommendation:** Avfallshanteras enligt myndigheters föreskrifter.
- **Rekommenderat rengöringsmedel:** Vatten, eventuellt med tillsats av rengöringsmedel.

AVSNITT 14: Transportinformation

- | | |
|---|--|
| <ul style="list-style-type: none"> · 14.1 UN-nummer · ADR, IMDG, IATA | UN2209 |
| <ul style="list-style-type: none"> · 14.2 Officiell transportbenämning · ADR · IMDG, IATA | 2209 FORMALDEHYD, LÖSNING
FORMALDEHYDE SOLUTION |
| <ul style="list-style-type: none"> · 14.3 Faroklass för transport · ADR, IMDG, IATA | |
| <div style="text-align: center;">  </div> <ul style="list-style-type: none"> · Klass · Etikett | 8 Frätande ämnen
8 |
| <ul style="list-style-type: none"> · 14.4 Förpackningsgrupp · ADR, IMDG, IATA | III |
| <ul style="list-style-type: none"> · 14.5 Miljöfaror: | Ej användbar. |
| <ul style="list-style-type: none"> · 14.6 Särskilda skyddsåtgärder · Kemler-tal: · EMS-nummer: · Stowage Category | Varning: Frätande ämnen
80
F-A,S-B
A |
| <ul style="list-style-type: none"> · 14.7 Bulktransport enligt bilaga II till Marpol 73/78 och IBC-koden | Ej användbar. |

(Fortsättning på sida 8)

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(Fortsättning från sida 7)

· **Transport / ytterligare uppgifter:**

· **ADR**

· **Begränsade mängder (LQ)**

5L

· **Reducerade mängder (EQ)**

Kod: E1

Högsta nettomängd per innerförpackning: 30 ml

Högsta nettomängd per ytterförpackning: 1000 ml

· **Transportkategori**

3

· **Tunnelrestriktionskod**

E

· **IMDG**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":**

UN 2209 FORMALDEHYD, LÖSNING, 8, III

AVSNITT 15: Gällande föreskrifter

· **15.1 Föreskrifter/lagstiftning om ämnet eller blandningen när det gäller säkerhet, hälsa och miljö**

· **Direktiv 2012/18/EU**

· **Namngivna farliga ämnen - BILAGA I** Inga beståndsdelar är listade.

· **Seveso-kategorier H2 AKUT TOXICITET**

· **Tröskelvärden (i ton) för tillämpning av krav för lägre nivå 50 t**

· **Tröskelvärden (i ton) för tillämpning av krav för övre nivå 200 t**

· **Förordning (EG) nr 1907/2006 BILAGA XVII Villkor: 3, 28**

· **Nationella föreskrifter:**

· **Hänvisningar beträffande inskränkning av sysselsättning:**

Arbetstagare får inte utsättas för det cancerframkallande farliga ämnet som denna tillredning innehåller. I enstaka fall kan myndigheten medge undantag.

· **15.2 Kemikaliesäkerhetsbedömning:** En kemikaliesäkerhetsbedömning har ej gjorts.

AVSNITT 16: Annan information

Uppgifterna är baserade på våra aktuella kunskaper. De representerar emellertid ingen som helst garanti beträffande produkttegenskaper och utgör ingen grund för ett avtalat rättsförhållande.

· **Relevanta fraser**

H301 Giftigt vid förtäring.

H311 Giftigt vid hudkontakt.

H314 Orsakar allvarliga frätskador på hud och ögon.

H317 Kan orsaka allergisk hudreaktion.

H331 Giftigt vid inandning.

H341 Misstänks kunna orsaka genetiska defekter.

H350 Kan orsaka cancer.

· **Förkortningar och akronymer:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

(Fortsättning på sida 9)

Säkerhetsdatablad
Enligt 1907/2006/EG, Artikel 31

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(Fortsättning från sida 8)

ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 3: Akut toxicitet – Kategori 3
Acute Tox. 4: Akut toxicitet – Kategori 4
Skin Corr. 1B: Frätande eller irriterande på huden – Kategori 1B
Eye Dam. 1: Allvarlig ögonskada eller ögonirritation – Kategori 1
Skin Sens. 1: Hudsensibilisering – Kategori 1
Muta. 2: Mutagenitet i könsceller – Kategori 2
Carc. 1B: Cancerogenitet – Kategori 1B
STOT SE 3: Specifik organotoxicitet (enstaka exponering) – Kategori 3

SE

แผ่นข้อมูลความปลอดภัย

ตาม 1907/2006/EC, มาตรา 31

วันที่พิมพ์ 2018.10.30

การปรับปรุงใหม่ : 2018.10.30

1 การระบุสาร/ การทำ/ และของบริษัท / บริษัทที่เข้าถือครอง

- 1.1 ลักษณะเฉพาะของผลิตภัณฑ์
- ชื่อทางการค้า **PARAFORMALDEHYDE 32% SOLUTION, EM GRADE**
- เลขที่รายชื่อ 15714, 15714-S, 15714-1L, 15714-SP
- 1.2 สารหรือสารผสมที่เกี่ยวข้องที่ระบุให้ใช้และที่ไม่ควรให้ใช้ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- การประยุกต์ใช้สาร/ การทำ เคมีภัณฑ์ห้องทดลอง
- 1.3 รายละเอียดของผู้จัดหาข้อมูลด้านความปลอดภัย
- ผู้ผลิต/ ผู้จัดหา
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- ข้อมูลรายละเอียดเพิ่มเติมหาได้จาก Product safety department
- 1.4 หมายเลขโทรศัพท์ฉุกเฉิน:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 การระบุสิ่งที่เป็นอันตราย

- 2.1 การจำแนกประเภทของสารหรือสารผสม
- การแบ่งประเภทตามข้อบังคับ (จีซี) เลขที่ 1272/2008



หัวกระโหลกและกระดูกไขว้

Acute Tox. 3 H311 มีพิษโดยการสัมผัสกับผิวหนัง

Acute Tox. 3 H331 มีพิษหากสูดหายใจเข้า



สิ่งอันตรายต่อสุขภาพ

Muta. 2 H341 สงสัยว่าจะเป็นสาเหตุให้เกิดข้อบกพร่องทางพันธุกรรม

Carc. 1B H350 อาจเป็นเหตุให้เกิดมะเร็ง



การกัดกร่อน

Skin Corr. 1 H314 เป็นสาเหตุให้ผิวหนังไหม้อย่างสาหัสและทำอันตรายต่อดวงตา

Eye Dam. 1 H318 เป็นสาเหตุให้เกิดอันตรายต่อดวงตาอย่างสาหัส



Acute Tox. 4 H302 เป็นอันตรายหากกลืนเข้าไป

Skin Sens. 1 H317 อาจเป็นสาเหตุให้ผิวหนังแสดงอาการแพ้

STOT SE 3 H335 อาจเป็นสาเหตุให้เกิดการระคายเคืองต่อระบบหายใจ

- 2.2 องค์ประกอบของฉลาก

- ฉลากตามระเบียบ (EC) เลขที่ 1272/2008 ผลิตภัณฑ์ได้รับการจัดประเภทและติดฉลากตามข้อบังคับของ CLP

(ต่อที่หน้า 2)

แผ่นข้อมูลความปลอดภัย

ตาม 1907/2006/EC, มาตรา 31

วันที่พิมพ์ 2018.10.30

การปรับปรุงใหม่ : 2018.10.30

ชื่อทางการค้า PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(ต่อหน้า 1)

· ภาพสัญลักษณ์สิ่งที่เป็นอันตราย



GHS05 GHS06 GHS08

· สัญญาณคำ อันตราย

· ส่วนประกอบที่ระบุอันตรายบนฉลาก

ฟอร์มัลดีไฮด์

· ประกาศสิ่งที่เป็นอันตราย

H302 เป็นอันตรายหากกลืนเข้าไป

H311+H331 เป็นพิษ หากมีการสัมผัสกับผิวหนัง หรือ หากมีการสูดดม.

H314 เป็นสาเหตุให้ผิวหนังไหม้อย่างสาหัสและทำอันตรายต่อดวงตา

H317 อาจเป็นสาเหตุให้ผิวหนังแสดงอาการแพ้

H341 สงสัยว่าจะเป็นสาเหตุให้เกิดข้อบกพร่องทางพันธุกรรม

H350 อาจเป็นเหตุให้เกิดมะเร็ง

H335 อาจเป็นสาเหตุให้เกิดการระคายเคืองต่อระบบหายใจ

· ประกาศการป้องกันระดับระวังภัย

P303+P361+P353 หากสัมผัสถูกผิวหนัง (หรือเส้นผม) ถอดเสื้อผ้าที่เปื้อนทั้งหมดทันที ล้างผิวด้วยน้ำ/อาบน้ำ

P305+P351+P338 หากเข้าตา : ชะล้างตาอย่างระมัดระวังเป็นเวลาหลายๆนาทีถอดคอนแทกซ์เลนส์ถ้ายังอยู่ที่เดิมและสะดวกที่จะทำก็ให้ชะล้างต่อไป

P310 โทรศัพท์ถึงศูนย์พิษวิทยา/แพทย์ ทันที

P321 การบำบัดรักษาเฉพาะ (ดูฉลาก)

P361+P364 ถอดเสื้อผ้าที่เปื้อนทั้งหมดทันทีและซักก่อนที่จะนำกลับมาใช้ใหม่

P405 เก็บในที่ปลอดภัย

P501 ทิ้งสิ่งที่บรรจุ/ภาชนะที่บรรจุตามกฎหมายของท้องถิ่น/แคว้น/ในประเทศ/ระหว่างประเทศ

· 2.3 อันตรายอื่นๆ

· ผลของ PBT และการประเมิน vPvB

· PBT: ไม่สามารถใช้ได้

· vPvB: ไม่สามารถใช้ได้

3 ส่วนประกอบ/ ข้อมูลรายละเอียดของส่วนผสมต่างๆ

· 3.2 คุณลักษณะทางเคมี: ส่วนผสม

· คำอธิบาย ส่วนผสมของสารในรายการข้างล่างพร้อมสารเติมแต่งที่ไม่เป็นอันตราย

· ส่วนประกอบที่มีอันตราย

CAS: 50-00-0	ฟอร์มัลดีไฮด์	>25-≤50%
EINECS: 200-001-8	☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ Muta. 2, H341; Carc. 1B, H350; ☠ Skin Corr. 1, H314; ☠ Skin Sens. 1, H317	

· ข้อมูลรายละเอียดเสริม สำหรับข้อความที่ระบุในรายการความเสี่ยงที่อ้างอิงถึงในส่วนที่ 16

4 มาตรการการปฐมพยาบาลเบื้องต้น

· 4.1 คำอธิบายถึงมาตรการปฐมพยาบาล

· ข้อมูลรายละเอียดทั่วไป

ให้ถอดเสื้อผ้าที่เปื้อนออกทันที

อาการจากพิษอาจเกิดขึ้นหลังจากนั้นหลายชั่วโมงดังนั้นจะต้องเฝ้าติดตามอาการทางการแพทย์อย่างน้อย 48 ชั่วโมงหลังจากอุบัติเหตุ

ให้ถอดอุปกรณ์ช่วยหายใจออกหลังจากที่ถอดเสื้อผ้าที่เปื้อนออกเรียบร้อยแล้วเท่านั้น

ในกรณีที่หายใจผิดปกติหรือการหายใจหยุดชะงักให้ใช้อุปกรณ์ช่วยหายใจ

(ต่อหน้า 3)

แผนข้อมูลความปลอดภัย

ตาม 1907/2006/EC, มาตรา 31

วันที่พิมพ์ 2018.10.30

การปรับปรุงใหม่ : 2018.10.30

ชื่อทางการค้า PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(ต่อที่หน้า 2)

- **หลังจากการสูดหายใจเข้าไป**
 หากริเวณที่มีอากาศบริสุทธิ์หรือให้ออกซิเจนติดต่อแพทย์
 ในกรณีที่คนไข้ไม่รู้สึกตัวให้ขนย้ายคนไข้อย่างมั่นคงในท่าตะแคงด้านข้าง
- **หลังจากการสัมผัสผิวหนัง** ล้างด้วยน้ำและสบู่แล้วฟอกให้ทั่วทันที
- **หลังจากการสัมผัสลูกตา** ชะตาที่เปิดอยู่ใต้น้ำที่ก่่าล้างไหลเป็นเวลาหลายนาที่จากนั้นให้ปรึกษาแพทย์
- **หลังจากการกลืนเข้าไป:**
 พบแพทย์โดยทันที
 ดื่มน้ำมากๆและให้สูดอากาศบริสุทธิ์พบแพทย์โดยทันที
- **4.2 อาการสำคัญส่วนใหญ่และผลกระทบ ทั้งชนิดเฉียบพลันและค่อยๆ แสดงอาการ**
 ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- **4.3 ข้อบ่งชี้ของอาการที่ต้องเข้ารับการรักษาจากแพทย์ทันทีและการบำบัดพิเศษที่จำเป็น**
 ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

5 มาตรการการดับเพลิง

- **5.1 สารที่ใช้ดับเพลิง**
- **สารดับเพลิงที่เหมาะสม**
 คาร์บอนไดออกไซด์สเปรย์ผงหรือน้ำดับเพลิงขนาดใหญ่ด้วยการฉีดน้ำหรือโฟมแอลกอฮอล์ที่ทนทาน
- **5.2 อันตรายเฉพาะอย่างที่เกิดจากสารหรือส่วนผสม** ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- **5.3 คำแนะนำสำหรับพนักงานดับเพลิง**
- **อุปกรณ์ป้องกันภัย** อุปกรณ์ป้องกันซึ่งเหมาะสำหรับการหายใจทางปาก

6 มาตรการลดอุบัติเหตุ

- **6.1 การป้องกันส่วนบุคคล อุปกรณ์ป้องกัน และขั้นตอนดำเนินการเมื่อเกิดกรณีฉุกเฉิน**
 สวมอุปกรณ์ป้องกันภัยกันคนที่ไม่ใช้อุปกรณ์ป้องกันออกไป
- **6.2 การให้ความคุ้มครองสิ่งแวดล้อมล่วงหน้า:**
 ทำให้เจือจางด้วยน้ำมากๆ
 อย่าปล่อยให้เข้าไปในท่อน้ำทิ้ง/ น้ำบนดินหรือใต้ดิน
- **6.3 วิธีดำเนินการและวัสดุสำหรับการบรรจุและการทำความสะอาด:**
 ดูดซับด้วยวัสดุที่สามารถยึดของเหลวไว้ (ทรายไดอะโตไมท์ตัวยึดเกาะกรดตัวยึดทั่วๆ ไปซีลีเยอ)
 ใช้สารทำให้เป็นกลาง
 ทิ้งวัสดุที่ปนเปื้อนเป็นของเสียตามรายการในบัญชี 13
 ตรวจสอบให้แน่ใจว่ามีการระบายอากาศที่ดีพอ
- **6.4 การอ้างอิงถึงส่วนอื่น**
 ดูข้อมูลรายละเอียดเรื่องความปลอดภัยในการขนถ่ายจากส่วนที่ 7
 ดูข้อมูลรายละเอียดเรื่องอุปกรณ์ป้องกันส่วนบุคคลจากส่วนที่ 8
 ดูข้อมูลรายละเอียดเรื่องการจัดจากส่วนที่ 13

7 การขนถ่ายและการจัดเก็บ

- **7.1 การป้องกันล่วงหน้าสำหรับการจัดการด้านความปลอดภัย**
 ทำให้แน่ใจว่าสถานที่ทำงานมีการระบายอากาศ/ ใกล้เคียงที่ดี
 เปิดและถือภาชนะรองรับอย่างระมัดระวัง
 ป้องกันการเกิดละอองสารฟุ้ง
- **ข้อมูลรายละเอียดเกี่ยวกับการป้องกันอัคคีภัยและการระเบิด**
 เก็บอุปกรณ์ป้องกันสำหรับการช่วยหายใจให้มีพร้อมใช้งาน
- **7.2 เงื่อนไขในการเก็บรักษาอย่างปลอดภัย, รวมถึงสิ่งที่เข้ากันไม่ได้ใดๆ**
- **การจัดเก็บ**
- **ข้อกำหนดที่ต้องปฏิบัติตามสำหรับห้องเก็บและภาชนะบรรจุ** ไม่มีข้อกำหนดพิเศษ
- **ข้อมูลรายละเอียดด้านการจัดเก็บในสถานที่จัดเก็บรวม** ไม่ได้กำหนด

(ต่อที่หน้า 4)

แผนข้อมูลความปลอดภัย

ตาม 1907/2006/EC, มาตรา 31

วันที่พิมพ์ 2018.10.30

การปรับปรุงใหม่ : 2018.10.30

ชื่อทางการค้า PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

(ต่อหน้า 3)

- ข้อมูลรายละเอียดเพิ่มเติมด้านสภาพการจัดเก็บ เก็บโดยปิดผนึกอย่างแน่นหนา
- 7.3 การระบุถึงการสิ้นสุดการใช้ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

8 การควบคุมการทิ้งในลักษณะเปิด / การป้องกันภัยสำหรับบุคคล

- ข้อมูลรายละเอียดเสริมสำหรับการออกแบบสิ่งอำนวยความสะดวกทางเทคนิค ไม่มีข้อมูลนอกเหนือจากนี้ดูรายการ 7
- 8.1 การควบคุมตัวแปร

- ส่วนผสมพร้อมค่าขอบเขตที่ต้องเฝ้าดูในสถานที่ปฏิบัติงาน

50-00-0 ฟอร์มัลดีไฮด์

PEL (US)	ค่าระยะสั้น: 2 ppm ค่าระยะยาว: 0.75 ppm see 29 CFR 1910.1048(c)
REL (US)	ค่าระยะยาว: 0.016 ppm Ceiling limit value: 0.1* ppm *15-min; See Pocket Guide App. A
TLV (US)	ค่าระยะสั้น: 0.37 mg/m ³ , 0.3 ppm ค่าระยะยาว: 0.12 mg/m ³ , 0.1 ppm DSEN; RSEN

- ข้อมูลรายละเอียดเสริม รายการถูกต้องระหว่างที่จัดทำโดยอาศัยการใช้งานเป็นหลัก

8.2 การควบคุมการสัมผัส

อุปกรณ์ป้องกันภัยส่วนบุคคล

มาตรการการป้องกันและสุขอนามัยทั่วไป

- เก็บให้ห่างจากสิ่งของที่เป็นอาหาร เครื่องดื่ม และอาหารสัตว์
- ให้ถอดเสื้อผ้าที่เปื้อนและเช็ดออกทันที
- ล้างมือก่อนที่จะหยุดพักและเมื่อสิ้นสุดเวลาทำงาน
- เก็บชุดป้องกันแยกต่างหาก
- หลีกเลี่ยงการสัมผัสผิวหนัง
- หลีกเลี่ยงการสัมผัสผิวหนังและผิวหนัง

การป้องกันการสูดหายใจเข้าไป

- ในกรณีที่อยู่เป็นเวลาสั้นหรืออากาศเป็นพิษระดับต่ำ ใช้หน้ากากกรองเพื่อช่วยหายใจในกรณีที่มีความเข้มข้นสูงหรืออยู่เป็นเวลานาน ให้ใช้เครื่องป้องกันที่มีอุปกรณ์ช่วยหายใจในตัว

การป้องกันมือ



ถุงมือป้องกัน

วัสดุของถุงมือจะต้องไม่ให้อากาศผ่านเข้าออกและทนทานต่อผลิตภัณฑ์/ สาร/ การผลิต เนื่องจากขาดการทดสอบจึงไม่มีคำแนะนำสำหรับวัสดุที่ใช้ทำถุงมือสำหรับผลิตภัณฑ์/ การผลิต/ ของผสมเคมี เลือกวัสดุสำหรับถุงมือโดยพิจารณาจากเวลาที่ใช้ในการซึมผ่านอัตราการแพร่และการเสื่อม

วัสดุที่ใช้ทำถุงมือ

- การเลือกใช้ถุงมือที่เหมาะสมไม่เพียงแต่ขึ้นอยู่กับวัสดุแต่ยังขึ้นกับมาตรฐานด้านคุณภาพและข้อแตกต่างระหว่างผู้ผลิตแต่ละแห่ง โดยที่ผลิตภัณฑ์เตรียมมาจากสารหลายชนิดความทนทานของวัสดุถุงมือไม่สามารถที่จะคำนวณล่วงหน้า ดังนั้นจึงต้องตรวจสอบกับการใช้งาน

เวลาที่ใช้ในการทะลุผ่านวัสดุที่ใช้ทำถุงมือ

- ผู้ผลิตถุงมือป้องกันจะต้องทดสอบหาเวลาแน่นอนที่ใช้ในการทะลุผ่านและจะต้องมีการตรวจสอบติดตาม

(ต่อหน้า 5)

TH

แผ่นข้อมูลความปลอดภัย

ตาม 1907/2006/EC, มาตรา 31

วันที่พิมพ์ 2018.10.30

การปรับปรุงใหม่ : 2018.10.30

ชื่อทางการค้า PARAFORMALDEHYDE 32% SOLUTION, EM GRADE

· การป้องกันตา

(ต่อหน้า 4)



แว่นตาที่ขอบปิดสนิท

9 คุณสมบัติทางกายภาพและเคมี

· 9.1 ข้อมูลคุณสมบัติพื้นฐานทางกายภาพและเคมี

· ข้อมูลรายละเอียดทั่วไป

· ลักษณะ :

รูปสีฐาน
สีของเหลว
ใส

· กลิ่น

ลักษณะพิเศษ

· เกณฑ์กลิ่น :

ไม่ได้กำหนดไว้.

· ค่า pH ที่ 20 °C

2.8

· การเปลี่ยนแปลงสถานะ

จุดหลอมเหลว/ ขอบเขตการหลอมละลาย
จุดเดือด/ ขอบเขตการเดือดไม่ได้กำหนด
>93 °C

· จุดวาบไฟ

>60 °C

· ความสามารถติดไฟ (ของแข็งแกส)

ไม่สามารถใช้ได้

· อุณหภูมิจุดระเบิด

300 °C

· อุณหภูมิสลายตัว

ไม่ได้กำหนดไว้.

· การเผาไหม้ด้วยตัวเอง

ผลิตภัณฑ์ไม่เป็นสารจุดไฟติดด้วยตัวเอง

· อันตรายจากการระเบิด

ไม่ได้กำหนดไว้.

· ขอบเขตการระเบิด

ขั้นต่ำ
ขั้นสูง

7 Vol %

73 Vol %

· ความดันไอ ที่ 20 °C

23 hPa

· ความหนาแน่น ที่ 20 °C

0.9392 g/cm³

· ความหนาแน่นสัมพัทธ์

ไม่ได้กำหนดไว้.

· ความหนาแน่นของไอ

ไม่ได้กำหนดไว้.

· อัตราการระเหย

ไม่ได้กำหนดไว้.

· ความสามารถในการละลายใน / ความสามารถผสมเป็นสารละลายเนื้อเดียวทุกส่วนผสมกับน้ำ

ผสมกันได้อย่างเต็มที่

· สัมประสิทธิ์การแยกตัว (เอ็น-ออกทานอล/น้ำ)

ไม่ได้กำหนดไว้.

· ความหนืด

(ไดนามิค) พลศาสตร์

ไม่ได้กำหนดไว้.

(คิเนมาติก) จลนศาสตร์

ไม่ได้กำหนดไว้.

· ปริมาณส่วนประกอบตัวทำละลาย

ตัวทำละลายอินทรีย์

32.0 %

น้ำ

68.0 %

VOC (EC)

32.00 %

(ต่อหน้า 6)

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แผนข้อมูลความปลอดภัย

ตาม 1907/2006/EC, มาตรา 31

วันที่พิมพ์ 2018.10.30

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(ต่อที่หน้า 5)

ส่วนประกอบที่เป็นของแข็ง	0.0 %
9.2 ข้อมูลอื่นๆ	ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

10 ความเสถียรและความสามารถในการทำปฏิกิริยา

- 10.1 ปฏิกิริยาโต้ตอบ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 10.2 เสถียรภาพทางเคมี
- การสลายตัวด้วยความร้อน / เจือจางที่ต้องหลีกเลี่ยง ไม่มีการสลายตัวถ้าใช้ตามรายละเอียดที่ระบุไว้
- 10.3 ความเป็นไปได้ของการเกิดปฏิกิริยาอันตราย ไม่มีปฏิกิริยาเป็นอันตรายที่รู้จัก
- 10.4 เจือจางเพื่อการหลีกเลี่ยง ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 10.5 วัสดุที่เข้ากันไม่ได้: ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 10.6 อันตรายจากการสลายตัวของผลิตภัณฑ์: ไม่มีสารจากการสลายตัวที่เป็นอันตรายที่รู้จัก

11 ข้อมูลรายละเอียดเกี่ยวกับพิษวิทยา

- 11.1 ข้อมูลเกี่ยวกับผลกระทบทางพิษวิทยา
- ความเป็นพิษอย่างสาหัส:
เป็นอันตรายหากกลืนเข้าไป
เป็นพิษ หากมีการสัมผัสกับผิวหนัง หรือ หากมีการสูดดม.

- การจัดแบ่งตามค่า LD/LC50

50-00-0 ฟอร์มัลดีไฮด์

ทางปาก	LD50	>200 mg/kg (rat)
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- อาการระคายเคืองเบื้องต้น
- บนผิวหนัง
เป็นสาเหตุให้ผิวหนังไหม้อย่างสาหัสและทำอันตรายต่อดวงตา
- ที่ดวงตา
เป็นสาเหตุให้เกิดอันตรายต่อดวงตาอย่างสาหัส
- การทำให้แพ้
อาจเป็นสาเหตุให้ผิวหนังแสดงอาการแพ้

12 ข้อมูลรายละเอียดเกี่ยวกับนิเวศวิทยา

- 12.1 ความเป็นพิษ
- ความเป็นพิษที่เกี่ยวข้องกับน้ำ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 12.2 การคงอยู่และการย่อยสลาย ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 12.3 การสะสมทางชีวภาพที่อาจเกิดขึ้น ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 12.4 การเปลี่ยนแปลงในดิน ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- ข้อมูลรายละเอียดเสริมเกี่ยวกับนิเวศวิทยา
- หมายเหตุทั่วไป
เป็นอันตรายต่อน้ำชั้น 2 (กฎข้อบังคับของเยอรมัน)(การประเมินค่าด้วยตัวเอง):เป็นอันตรายกับน้ำ
อย่าปล่อยให้ผลิตภัณฑ์ไปถึงน้ำผิวดินเส้นทางน้ำหรือระบบระบายน้ำเสีย
ผลิตภัณฑ์ที่ยังไม่ได้เจือจางหรือยังไม่ได้ทำให้เป็นกลางต้องไม่ไปถึงน้ำเสียหรือระบายน้ำ
เป็นอันตรายต่อน้ำดื่มแม้จะรั่วลงในพื้นดินเป็นปริมาณน้อย
- 12.5 ผลของ PBT และการประเมิน vPvB
- PBT: ไม่สามารถใช้ได้
- vPvB: ไม่สามารถใช้ได้

(ต่อที่หน้า 7)

แผนข้อมูลความปลอดภัย

ตาม 1907/2006/EC, มาตรา 31

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- 12.6 ผลข้างเคียงอื่นๆ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

(ต่อที่หน้า 6)

13 การพิจารณาการกำจัด

- 13.1 วิธีการกำจัดของเสีย
- คำแนะนำ ต้องไม่ทิ้งไปพร้อมกับขยะจากบ้านเรือนอย่าปล่อยให้ผลิตภัณฑ์เข้าถึงระบบระบายน้ำเสีย
- ภาชนะบรรจุที่ยังไม่ได้ล้างทำความสะอาด
- คำแนะนำ การกำจัดจะต้องทำตามกฎระเบียบที่เป็นทางการ
- สารทำความสะอาดที่แนะนำ นำถ้าจำเป็นใช้คู่กับสารทำความสะอาด

14 ข้อมูลรายละเอียดในการขนส่ง

- 14.1 เลขที่ UN
- ADR, IMDG, IATA UN2209
- 14.2 ชื่อการจัดส่งสินค้าที่เหมาะสมของ UN
- ADR 2209 FORMALDEHYDE SOLUTION
- IMDG, IATA FORMALDEHYDE SOLUTION
- 14.3 ชั้นเรียนอันตรายจากการขนส่ง
- ADR, IMDG, IATA
- ประเภท 8 สารกัดกร่อน
- ฉลากสิ่งที่เป็นอันตราย 8
- 14.4 กลุ่มของภาชนะบรรจุ
- ADR, IMDG, IATA III
- 14.5 สิ่งที่เป็นอันตรายต่อสภาพแวดล้อม ไม่สามารถใช้ได้
- 14.6 การป้องกันพิเศษล่วงหน้าสำหรับผู้ใช้ คำเตือน !: สารกัดกร่อน
- รหัสความอันตราย: 80
- หมายเลข EMS F-A,S-B
- Stowage Category A
- 14.7 การขนส่งขนาดใหญ่ตามภาคผนวก 2 ของ MARPOL73/78 และรหัส IBC ไม่สามารถใช้ได้

· การขนส่ง/ข้อมูลรายละเอียดเสริม

- ADR
- ปริมาณที่จำกัด (LQ) 5L
- Excepted quantities (EQ) Code: E1
- Maximum net quantity per inner packaging: 30 ml
- Maximum net quantity per outer packaging: 1000 ml
- หมวดหมู่การขนส่ง 3
- รหัสควบคุมการผ่านอุโมงค์ E

(ต่อที่หน้า 8)

แผ่นข้อมูลความปลอดภัย

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(ต่อที่หน้า 7)

· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· “กฎระเบียบต้นแบบ” ของ UN	UN 2209 FORMALDEHYDE SOLUTION, 8, III

15 ข้อมูลรายละเอียดของกฎระเบียบ

- 15.1 ความปลอดภัย สุขภาพและระเบียบ/กฎหมายสิ่งแวดล้อมโดยเฉพาะของสารหรือสารผสม
- บัญชีรายชื่อวัตถุอันตราย

· กรมวิชาการเกษตร

ไม่มีส่วนผสมใดอยู่ในรายการ

· กรมประมง

50-00-0 | ฟอรั่มัลดีไฮด์

ชนิดที่ 2

· กรมปศุสัตว์

50-00-0 | ฟอรั่มัลดีไฮด์

ชนิดที่ 3

· อาหารและยา

50-00-0 | ฟอรั่มัลดีไฮด์

ชนิดที่ 4

· กรมโรงงานอุตสาหกรรม

50-00-0 | ฟอรั่มัลดีไฮด์

ชนิดที่ 2

· กรมธุรกิจพลังงาน

ไม่มีส่วนผสมใดอยู่ในรายการ

· กฎหมายของประเทศ

· ข้อมูลรายละเอียดเกี่ยวกับขอบเขตการใช้งาน

ไม่อนุญาตให้คนงานเข้าไปสัมผัสกับวัตถุอันตรายที่ทำให้เกิดมะเร็งซึ่งมีอยู่ในการผลิตชื่อยกเว้นอาจทำได้เมื่อได้รับอนุญาตจากผู้มีอำนาจในบางกรณี

- 15.2 การประเมินความปลอดภัยของสารเคมี: ไม่ได้ดำเนินการตามการประเมินความปลอดภัยของสารเคมี

16 ข้อมูลรายละเอียดอื่นๆ

ข้อมูลรายละเอียดนี้ใช้ความรู้ปัจจุบันของเราเป็นหลักอย่างไรก็ตามข้อมูลนี้ไม่ใช่การรับประกันจากสถาบันต่อคุณสมบัติเฉพาะของผลิตภัณฑ์และไม่สามารถยืนยันการบังคับใช้ตามกฎหมายที่เกี่ยวข้องกับสัญญา

· รหัสที่เกี่ยวข้องกับ

H301 มีพิษหากกลืนเข้าไป

H311 มีพิษโดยการสัมผัสกับผิวหนัง

H314 เป็นสาเหตุให้ผิวหนังไหม้อย่างสาหัสและทำอันตรายต่อดวงตา

H317 อาจเป็นสาเหตุให้ผิวหนังแสดงอาการแพ้

H331 มีพิษหากสูดหายใจเข้าไป

H341 สงสัยว่าจะเป็นสาเหตุให้เกิดข้อบกพร่องทางพันธุกรรม

H350 อาจเป็นเหตุให้เกิดมะเร็ง

· คำย่อและชื่อย่อที่ผสมขึ้น

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

(ต่อที่หน้า 9)

แผ่นข้อมูลความปลอดภัย
ตาม 1907/2006/EC, มาตรา 31

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(ต่อหน้า 8)

EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1: Skin corrosion/irritation – Category 1
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 2: Germ cell mutagenicity – Category 2
Carc. 1B: Carcinogenicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

TH