

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/14/2017

Reviewed on 06/14/2017

1 Identification

- **Product identifier**
- **Trade name:** Formaldehyde, Reagent, A.C.S.
- **Article number:** 15680, 15681, 15686, 15682, 15686-500
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **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**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



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. 1A H350 May cause cancer.

STOT SE 1 H370 Causes damage to organs.



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.

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

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Trade name: Formaldehyde, Reagent, A.C.S.

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· **Hazard pictograms**



· **Signal word** *Danger*

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

formaldehyde

Methyl Alcohol

· **Hazard statements**

Flammable liquid and vapor.

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.

Causes damage to organs.

· **Precautionary statements**

Obtain special instructions before use.

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

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

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.

IF exposed or concerned: Get medical advice/attention.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

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

Take off immediately all contaminated clothing and wash it 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 in a well-ventilated place. Keep cool.

Store locked up.

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

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· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **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%
67-56-1	Methyl Alcohol	10-25%

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.

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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.
- **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
67-56-1	Methyl Alcohol	530 ppm

- **PAC-2:**

50-00-0	formaldehyde	14 ppm
67-56-1	Methyl Alcohol	2,100 ppm

- **PAC-3:**

50-00-0	formaldehyde	56 ppm
67-56-1	Methyl Alcohol	7200* 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:**
Protect from heat.
Protect against electrostatic charges.
Keep respiratory protective device available.

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- **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.
Protect from heat and direct sunlight.
- **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)
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

67-56-1 Methyl Alcohol

PEL	Long-term value: 260 mg/m ³ , 200 ppm
REL	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI

· **Ingredients with biological limit values:**

67-56-1 Methyl Alcohol

BEI	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
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- **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.

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· **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:**

Safety glasses



Tightly sealed goggles

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form:	Liquid
Color:	Not determined.
Odor:	Strong
Odor threshold:	Not determined.

· **pH-value at 20 °C (68 °F):** 7

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	64 °C (147 °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: 5.5 Vol %

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Upper:	73.0 Vol %
· Vapor pressure at 20 °C (68 °F):	128 hPa (96 mm Hg)
· Density at 20 °C (68 °F):	0.9045 g/cm ³ (7.548 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:	49.0 %
Water:	51.0 %
VOC content:	49.0 %
	822.7 g/l / 6.87 lb/gl
· 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)
67-56-1 Methyl Alcohol		
Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **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:

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*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.

· **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, ADR, IMDG, IATA**

UN1198

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US

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Trade name: Formaldehyde, Reagent, A.C.S.

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· **UN proper shipping name**
 · **DOT** *Formaldehyde solutions, flammable*
 · **ADR** *1198 Formaldehyde solutions, flammable*
 · **IMDG, IATA** *FORMALDEHYDE SOLUTION, FLAMMABLE*

· **Transport hazard class(es)**

· **DOT**



· **Class** *3 Flammable liquids*
 · **Label** *3, 8*

· **ADR**



· **Class** *3 Flammable liquids*
 · **Label** *3+8*

· **IMDG**



· **Class** *3 Flammable liquids*
 · **Label** *3/8*

· **IATA**



· **Class** *3 Flammable liquids*
 · **Label** *3 (8)*

· **Packing group**

· **DOT, ADR, IMDG, IATA** *III*

· **Environmental hazards:** *Not applicable.*

· **Special precautions for user** *Warning: Flammable liquids*

· **Danger code (Kemler):** *38*

· **EMS Number:** *F-E,S-C*

· **Stowage Category** *A*

· **Stowage Code** *SW2 Clear of living quarters.*

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

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Trade name: Formaldehyde, Reagent, A.C.S.

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· **Transport/Additional information:**

· **DOT**

· **Quantity limitations**

On passenger aircraft/rail: 5 L

On cargo aircraft only: 60 L

· **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: E0

Not permitted as Excepted Quantity

· **UN "Model Regulation":**

UN 1198 FORMALDEHYDE SOLUTIONS, FLAMMABLE, 3 (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

67-56-1 Methyl Alcohol

· **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:**

67-56-1 Methyl Alcohol

· **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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Trade name: Formaldehyde, Reagent, A.C.S.

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· **Hazard pictograms**



· **Signal word** *Danger*

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

formaldehyde

Methyl Alcohol

· **Hazard statements**

Flammable liquid and vapor.

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.

Causes damage to organs.

· **Precautionary statements**

Obtain special instructions before use.

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

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

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.

IF exposed or concerned: Get medical advice/attention.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

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

Take off immediately all contaminated clothing and wash it 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 in a well-ventilated place. Keep cool.

Store locked up.

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

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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.

- **Date of preparation / last revision** 06/14/2017 / -
- **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
BEI: Biological Exposure Limit
Flam. Liq. 3: Flammable liquids – Category 3
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. 1A: Carcinogenicity – Category 1A
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

US

Safety Data Sheet

according to WHS Regulations

Printing date 14.06.2017

Revision: 14.06.2017

1 Identification

· **Product identifier**

· **Trade name:** Formaldehyde, Reagent, A.C.S.

· **Article number:** 15680, 15681, 15686, 15682, 15686-500

· **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:**

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)

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**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



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. 1A H350 May cause cancer.

STOT SE 1 H370 Causes damage to organs.



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.

· **Label elements**

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

· **Hazard pictograms**



GHS02

GHS05

GHS06

GHS07

GHS08

· **Signal word** *Danger*

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

formaldehyde

Methyl Alcohol

· **Hazard statements**

Flammable liquid and vapour.

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.

Causes damage to organs.

· **Precautionary statements**

Obtain special instructions before use.

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

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

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.

IF exposed or concerned: Get medical advice/attention.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

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

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- Take off immediately all contaminated clothing and wash it 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 in a well-ventilated place. Keep cool.
 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%
67-56-1	Methyl Alcohol	10-25%

- **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.

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- **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:**
Protect from heat.
Protect against electrostatic charges.
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.
Protect from heat and direct sunlight.
- **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

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

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Trade name: **Formaldehyde, Reagent, A.C.S.**

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67-56-1 Methyl Alcohol

WES	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Sk
-----	---

· **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:**

Safety glasses



Tightly sealed goggles

9 Physical and Chemical Properties

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

· **General Information**

· **Appearance:**

Form: Liquid

Colour: Not determined.

· **Odour:** Strong

· **Odour threshold:** Not determined.

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Trade name: Formaldehyde, Reagent, A.C.S.

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· pH-value at 20 °C:	7
· Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	64 °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:	5.5 Vol %
Upper:	73.0 Vol %
· Vapour pressure at 20 °C:	128 hPa
· Density at 20 °C:	0.9045 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:	49.0 %
Water:	51.0 %
VOC (EC)	49.00 %
· 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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Trade name: Formaldehyde, Reagent, A.C.S.

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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)
------	------	------------------

67-56-1 Methyl Alcohol

Oral	LD50	5628 mg/kg (rat)
------	------	------------------

Dermal	LD50	15800 mg/kg (rabbit)
--------	------	----------------------

- **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. 1A

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

<ul style="list-style-type: none"> · UN-Number · ADG, IMDG, IATA 	UN1198
<ul style="list-style-type: none"> · UN proper shipping name · ADG · IMDG, IATA 	1198 FORMALDEHYDE SOLUTION, FLAMMABLE FORMALDEHYDE SOLUTION, FLAMMABLE
<ul style="list-style-type: none"> · Transport hazard class(es) · ADG 	<div style="display: flex; align-items: center; gap: 10px;">  </div>
<ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids. 3+8
<ul style="list-style-type: none"> · IMDG 	<div style="display: flex; align-items: center; gap: 10px;">  </div>
<ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids. 3/8
<ul style="list-style-type: none"> · IATA 	<div style="display: flex; align-items: center; gap: 10px;">  </div>
<ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids. 3 (8)
<ul style="list-style-type: none"> · Packing group · ADG, IMDG, IATA 	III
<ul style="list-style-type: none"> · Environmental hazards: 	Not applicable.
<ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: · Stowage Category 	Warning: Flammable liquids. 38 F-E,S-C A

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· Stowage Code	SW2 Clear of living quarters.
· 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	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN 1198 FORMALDEHYDE SOLUTION, FLAMMABLE, 3 (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
67-56-1	Methyl Alcohol	S5, S6

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

· **Hazard pictograms**



GHS02 GHS05 GHS06 GHS07 GHS08

· **Signal word** Danger

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

formaldehyde

Methyl Alcohol

· **Hazard statements**

Flammable liquid and vapour.

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.

Causes damage to organs.

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Trade name: Formaldehyde, Reagent, A.C.S.

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· **Precautionary statements**

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- 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.
- IF exposed or concerned: Get medical advice/attention.
- Immediately call a POISON CENTER/doctor.
- Specific treatment (see on this label).
- If skin irritation or rash occurs: Get medical advice/attention.
- Take off immediately all contaminated clothing and wash it 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 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 formaldehyde, Methyl Alcohol**

· **Seveso category**

H2 ACUTE TOXIC

P5c FLAMMABLE LIQUIDS

· **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.

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

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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. 3: Flammable liquids – Category 3
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. 1A: Carcinogenicity – Category 1A
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

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Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 06/14/2017

1 Identification

- **Product identifier**
- **Trade name:** Formaldehyde, Reagent, A.C.S.
- **Article number:** 15680, 15681, 15686, 15682, 15686-500
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **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**



GHS02 Flame

Flammable Liquids - Category 3

H226 Flammable liquid and vapour.



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 1A

H350 May cause cancer.

Specific Target Organ Toxicity - Single Exposure -
Category 1

H370 Causes damage to organs.



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.

- **Label elements**

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

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Trade name: Formaldehyde, Reagent, A.C.S.

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· **Hazard pictograms**



· **Signal word** *Danger*

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

formaldehyde

Methyl Alcohol

· **Hazard statements**

Flammable liquid and vapour.

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.

Causes damage to organs.

· **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.

Ground and bond container and receiving equipment.

Use explosion-proof [electrical/ventilating/lighting] equipment.

Use non-sparking tools.

Take actions to prevent static discharges.

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.

IF exposed or concerned: Get medical advice/attention.

Immediately call a POISON CENTER/doctor.

Specific measures (see on this label).

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

Take off contaminated clothing and wash it before reuse.

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 in a well-ventilated place. Keep cool.

Store locked up.

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

· **Hazard description:**

· **WHMIS-symbols:**

B3 - Combustible liquid

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Trade name: Formaldehyde, Reagent, A.C.S.

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D1B - Toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects

E - Corrosive material



· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

HEALTH	4	Health = *4
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
67-56-1	Methyl Alcohol	7-13% w/w

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.*

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Trade name: Formaldehyde, Reagent, A.C.S.

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- **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.
- **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:**
Protect from heat.
Protect against electrostatic charges.
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.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

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Trade name: Formaldehyde, Reagent, A.C.S.

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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 A2; IARC 1; S

EV Short-term value: 1.0 ppm
Ceiling limit value 1.5 ppm

67-56-1 Methyl Alcohol

EL Short-term value: 250 ppm
Long-term value: 200 ppm
Skin

EV Short-term value: 325 mg/m³, 250 ppm
Long-term value: 260 mg/m³, 200 ppm
Skin

· **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.

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Trade name: Formaldehyde, Reagent, A.C.S.

(Contd. of page 5)

· **Eye protection:**

Safety glasses



Tightly sealed goggles

9 Physical and chemical properties

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

· Form:	Liquid
· Color:	Not determined.
· Odor:	Strong
· Odor threshold:	Not determined.

· **pH-value at 20 °C:** 7· **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	64 °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:	5.5 Vol %
· Upper:	73.0 Vol %

· **Vapor pressure at 20 °C:** 128 hPa

· Density at 20 °C:	0.9045 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:	49.0 %
· Water:	51.0 %

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Trade name: Formaldehyde, Reagent, A.C.S.

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· **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)
------	------	------------------

67-56-1 Methyl Alcohol

Oral	LD50	5628 mg/kg (rat)
------	------	------------------

Dermal	LD50	15800 mg/kg (rabbit)
--------	------	----------------------

· **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
---------	--------------	---

· **NTP (National Toxicology Program)**

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

12 Ecological information

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

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- **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 | UN1198 |
| · UN proper shipping name | |
| · DOT | Formaldehyde solutions, flammable |
| · TDG | 1198 Formaldehyde solutions, flammable |
| · IMDG, IATA | FORMALDEHYDE SOLUTION, FLAMMABLE |

- **Transport hazard class(es)**

- **DOT**



- **Class** 3 Flammable liquids
- **Label** 3, 8

- **TDG (Transport dangerous goods):**



- **Class** 3 Flammable liquids

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CA

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· **Label** 3+8· **IMDG**

· **Class** 3 Flammable liquids
 · **Label** 3/8

· **IATA**

· **Class** 3 Flammable liquids
 · **Label** 3 (8)

· **Packing group**
 · **DOT, TDG, IMDG, IATA** III

· **Environmental hazards:** Not applicable.

· **Special precautions for user** Warning: Flammable liquids
 · **Danger code (Kemler):** 38
 · **EMS Number:** F-E,S-C
 · **Stowage Category** A
 · **Stowage Code** SW2 Clear of living quarters.

· **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 L

· **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: E0
 Not permitted as Excepted Quantity

· **UN "Model Regulation":** UN 1198 FORMALDEHYDE SOLUTIONS, FLAMMABLE, 3 (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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· **Section 313 (Specific toxic chemical listings):**

50-00-0	formaldehyde
67-56-1	Methyl Alcohol

· **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%)**

67-56-1	Methyl Alcohol
---------	----------------

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

· **Hazard pictograms**



GHS02

GHS05

GHS06

GHS07

GHS08

· **Signal word** *Danger*

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

formaldehyde

Methyl Alcohol

· **Hazard statements**

Flammable liquid and vapour.

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.

Causes damage to organs.

· **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.

Ground and bond container and receiving equipment.

Use explosion-proof [electrical/ventilating/lighting] equipment.

Use non-sparking tools.

Take actions to prevent static discharges.

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].

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Trade name: Formaldehyde, Reagent, A.C.S.

(Contd. of page 10)

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.

IF exposed or concerned: Get medical advice/attention.

Immediately call a POISON CENTER/doctor.

Specific measures (see on this label).

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

Take off contaminated clothing and wash it before reuse.

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 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.*

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** 06/14/2017 / -

· **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)

WHMIS: Workplace Hazardous Materials Information System (Canada)

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 14.06.2017

Revision: 14.06.2017

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

- **Product identifier**
- **Trade name:** Formaldehyde, Reagent, A.C.S.
- **Article number:** 15680, 15681, 15686, 15682, 15686-500
- **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**
- **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**



flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



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.

STOT SE 1 H370 Causes damage to organs.



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.

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

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Trade name: **Formaldehyde, Reagent, A.C.S.**

(Contd. of page 1)

· **Hazard pictograms**

GHS02 GHS05 GHS06 GHS08

· **Signal word** *Danger*· **Hazard-determining components of labelling:***formaldehyde**Methyl Alcohol*· **Hazard statements***Flammable liquid and vapour.**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.**Causes damage to organs.*· **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).**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 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%
67-56-1	Methyl Alcohol Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Corr. 3, H316; Eye Irrit. 2B, H320	10-25%

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

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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 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 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.

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Trade name: Formaldehyde, Reagent, A.C.S.

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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:**
Protect from heat.
Protect against electrostatic charges.
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.
Protect from heat and direct sunlight.
- **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

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- **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:**

Safety glasses



Tightly sealed goggles

9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form:	Liquid
Colour:	Not determined.
Odour:	Strong
Odour threshold:	Not determined.

- **pH-value at 20 °C:** 7

- **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	64 °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:	5.5 Vol %
Upper:	73.0 Vol %

- **Vapour pressure at 20 °C:** 128 hPa

Density at 20 °C:	0.9045 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.

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Trade name: **Formaldehyde, Reagent, A.C.S.**

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- | | |
|----------------------------|--|
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 49.0 % |
| Water: | 51.0 % |
| VOC (EC) | 49.00 % |
| · 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)
------	------	------------------

67-56-1 Methyl Alcohol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **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.

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- **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.

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 | UN1198 |
| · ADR, IMDG, IATA | |
| · UN proper shipping name | 1198 FORMALDEHYDE SOLUTION, FLAMMABLE |
| · ADR | FORMALDEHYDE SOLUTION, FLAMMABLE |
| · IMDG, IATA | |
| · Transport hazard class(es) | |
| · ADR | |
|  | |
| · Class | 3 Flammable liquids. |

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· Label	3+8
· IMDG	
	
· Class	3 Flammable liquids.
· Label	3/8
· IATA	
	
· Class	3 Flammable liquids.
· Label	3 (8)
· Packing group	III
· ADR, IMDG, IATA	III
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	38
· EMS Number:	F-E,S-C
· Stowage Category	A
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· 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	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN 1198 FORMALDEHYDE SOLUTION, FLAMMABLE, 3 (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).

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· **Hazard pictograms**

GHS02 GHS05 GHS06 GHS08

· **Signal word** *Danger*· **Hazard-determining components of labelling:***formaldehyde**Methyl Alcohol*· **Hazard statements***Flammable liquid and vapour.**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.**Causes damage to organs.*· **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).**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*· **Directive 2012/18/EU**· **Named dangerous substances - ANNEX I** *formaldehyde, Methyl Alcohol*· **Seveso category***H2 ACUTE TOXIC**P5c FLAMMABLE LIQUIDS*· **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.***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***H225 Highly flammable liquid and vapour.**H301 Toxic if swallowed.**H302 Harmful if swallowed.**H311 Toxic in contact with skin.**H312 Harmful in contact with skin.*

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Safety data sheet
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Trade name: Formaldehyde, Reagent, A.C.S.

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*H314 Causes severe skin burns and eye damage.**H316 Causes mild skin irritation.**H317 May cause an allergic skin reaction.**H320 Causes eye irritation.**H331 Toxic if inhaled.**H332 Harmful if inhaled.**H341 Suspected of causing genetic defects.**H350 May cause cancer.**H370 Causes damage to organs.***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. 2: Flammable liquids – Category 2**Flam. Liq. 3: Flammable liquids – Category 3**Acute Tox. 3: Acute toxicity – Category 3**Acute Tox. 4: Acute toxicity – Category 4**Skin Corr. 1B: Skin corrosion/irritation – Category 1B**Skin Corr. 3: Skin corrosion/irritation – Category 3**Eye Dam. 1: Serious eye damage/eye irritation – Category 1**Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B**Skin Sens. 1: Skin sensitisation – Category 1**Muta. 2: Germ cell mutagenicity – Category 2**Carc. 1B: Carcinogenicity – Category 1B**STOT SE 1: Specific target organ toxicity (single exposure) – Category 1*

IL

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

Printing date 14.06.2017

Revision: 14.06.2017

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

- **1.1 Product identifier**
- **Trade name:** Formaldehyde, Reagent, A.C.S.
- **Article number:** 15680, 15681, 15686, 15682, 15686-500
- **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**
- **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**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



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.

STOT SE 1 H370 Causes damage to organs.



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.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

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Safety data sheet

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Trade name: **Formaldehyde, Reagent, A.C.S.**

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· **Hazard pictograms**· **Signal word** *Danger*· **Hazard-determining components of labelling:***formaldehyde**Methyl Alcohol*· **Hazard statements**H226 *Flammable liquid and vapour.*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.*H370 *Causes damage to organs.*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).*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 EINECS: 200-001-8	<i>formaldehyde</i> ⚠ 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%
CAS: 67-56-1 EINECS: 200-659-6	<i>Methyl Alcohol</i> ⚠ Flam. Liq. 2, H225; ⚠ STOT SE 1, H370; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	10-25%

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

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Trade name: **Formaldehyde, Reagent, A.C.S.**

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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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Safety data sheet
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Trade name: **Formaldehyde, Reagent, A.C.S.**

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Open and handle receptacle with care.

Prevent formation of aerosols.

· **Information about fire - and explosion protection:**

Protect from heat.

Protect against electrostatic charges.

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.

Protect from heat and direct sunlight.

· **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/m³, 2 ppm

Long-term value: 2.5 mg/m³, 2 ppm

67-56-1 Methyl Alcohol

WEL Short-term value: 333 mg/m³, 250 ppm

Long-term value: 266 mg/m³, 200 ppm

Sk

· **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

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- **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:**

Safety glasses



Tightly sealed goggles

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Liquid
Colour:	Not determined.
Odour:	Strong
Odour threshold:	Not determined.

- **pH-value at 20 °C:** 7

- **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	64 °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:	5.5 Vol %
Upper:	73.0 Vol %

- **Vapour pressure at 20 °C:** 128 hPa

Density at 20 °C:	0.9045 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.

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- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **Solvent content:**
 - Organic solvents:** 49.0 %
 - Water:** 51.0 %
 - VOC (EC)** 49.00 %
- **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)
------	------	------------------

67-56-1 Methyl Alcohol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **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**
Causes damage to organs.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.

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Trade name: **Formaldehyde, Reagent, A.C.S.**

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· **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
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 | UN1198 |
| · ADR, IMDG, IATA | |
| · 14.2 UN proper shipping name | 1198 FORMALDEHYDE SOLUTION, FLAMMABLE |
| · ADR | FORMALDEHYDE SOLUTION, FLAMMABLE |
| · IMDG, IATA | |
| · 14.3 Transport hazard class(es) | |
| · ADR | |
|  | |
| · Class | 3 Flammable liquids. |

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Trade name: Formaldehyde, Reagent, A.C.S.

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· Label	3+8
· IMDG	
	
· Class	3 Flammable liquids.
· Label	3/8
· IATA	
	
· Class	3 Flammable liquids.
· Label	3 (8)
· 14.4 Packing group	
· ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	38
· EMS Number:	F-E,S-C
· Stowage Category	A
· Stowage Code	SW2 Clear of living quarters.
· 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
· 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	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN 1198 FORMALDEHYDE SOLUTION, FLAMMABLE, 3 (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 formaldehyde, Methyl Alcohol

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- **Seveso category**
H2 ACUTE TOXIC
P5c FLAMMABLE LIQUIDS
- **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
- **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**
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H370 Causes damage to organs.
- **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
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
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 1: Specific target organ toxicity (single exposure) – Category 1

化学品安全技术说明书

根据 GB/T 16483-2008, GB/T 17519-2013

打印日期 2017.06.14

在 2017.06.14 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: Formaldehyde, Reagent, A.C.S.
- 商品编号: 15680, 15681, 15686, 15682, 15686-500
- 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
- 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:

未决定. 液体, 易燃液体和蒸气。 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。 对器官造成损害。

· GHS危险性类别



火焰

易燃液体 第3类

H226 易燃液体和蒸气



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

特定靶器官系统毒性(单次接触) 第1类 H370 对器官造成损害



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

· 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。

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化学品安全技术说明书

根据 GB/T 16483-2008, GB/T 17519-2013

打印日期 2017.06.14

在 2017.06.14 审核

化学品中文(英文)名称, 化学品俗名或商品名 : Formaldehyde, Reagent, A.C.S.

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· 图示



GHS02 GHS05 GHS06 GHS08

· 名称 危险

· 标签上辨别危险的成份:

福尔马林溶液
木精

· 危险字句

易燃液体和蒸气
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
对器官造成损害

· 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)

· 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%
67-56-1	木精 ⚠ 易燃液体 第2类, H225; ⚠ 特定靶器官系统毒性(单次接触) 第1类, H370; ⚠ 急性毒性(经口) 第4类, H302; 急性毒性(经皮肤) 第4类, H312; 急性毒性(吸入) 第4类, H332; 皮肤腐蚀/刺激 第3类, H316; 严重眼损伤/眼刺激 类别2B, H320	10-25%

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化学品中文(英文)名称, 化学品俗名或商品名 : Formaldehyde, Reagent, A.C.S.

(在 2 页继续)

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.

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. 然后谘询医生.

· 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.

(在 4 页继续)

化学品安全技术说明书

根据 GB/T 16483-2008, GB/T 17519-2013

打印日期 2017.06.14

在 2017.06.14 审核

化学品中文(英文)名称, 化学品俗名或商品名 : Formaldehyde, Reagent, A.C.S.

(在 3 页继续)

- **有关火灾及防止爆炸的资料:**
 - 防热.
 - 防静电.
 - 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.
- **有关储存条件的更多资料:**
 - 将容器密封.
 - 免受接触热力和直接受阳光照射.
- **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

67-56-1 木精

OEL (CN)	PC-STEL: 50 mg/m ³
	PC-TWA: 25 mg/m ³

- **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

(在 5 页继续)

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(在 4 页继续)

· 眼睛防护:
安全眼镜



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
颜色: 未决定.

· 气味: 坚固的

· 嗅觉阈限 未决定.

· pH值 在 20 °C: 7

· 条件的更改

熔点: 未确定的

沸点/初沸点和沸程: 64 °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: 5.5 Vol %

较高: 73.0 Vol %

· 蒸气压 在 20 °C: 128 hPa

· 密度 在 20 °C: 0.9045 g/cm³

· 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: 49.0 %

水: 51.0 %

(在 6 页继续)

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(在 5 页继续)

· **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。

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)
----	------	------------------

67-56-1 木精

口腔	LD50	5628 mg/kg (rat)
----	------	------------------

皮肤	LD50	15800 mg/kg (rabbit)
----	------	----------------------

- **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。

(在 7 页继续)

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(在 6 页继续)

· 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): 对水是危害的

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.

即使是少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.

· 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)

· ADR, IMDG, IATA

UN1198

· UN适当装船名

· ADR

1198 甲醛溶液, 易燃

· IMDG, IATA

FORMALDEHYDE SOLUTION, FLAMMABLE

· 运输危险等级

· ADR



· 级别

3 易燃液体

· 标签

3+8

· IMDG



· Class

3 易燃液体

· Label

3/8

· IATA



· Class

3 易燃液体

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(在 7 页继续)

· Label	3 (8)
· 包装组别	
· ADR, IMDG, IATA	III
· 危害环境:	不适用的
· 用户特别预防措施	警告: 易燃液体
· 危险编码:	38
· EMS 号码:	F-E,S-C
· Stowage Category	A
· Stowage Code	SW2 Clear of living quarters.
· 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: E0 Not permitted as Excepted Quantity
· UN "标准规定":	UN 1198 甲醛溶液, 易燃, 3 (8), III

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

67-56-1 木精

· 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



GHS02

GHS05

GHS06

GHS08

- 名称 危险

· 标签上辨别危险的成份:

福尔马林溶液

木精

(在 9 页继续)

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· 危险字句

易燃液体和蒸气
 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
 对器官造成损害

· 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)

· 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
 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2类: Flammable liquids – Category 2
 易燃液体 第3类: Flammable liquids – Category 3
 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
 皮肤腐蚀/刺激 第3类: Skin corrosion/irritation – Category 3
 严重眼睛损伤/眼睛刺激性 第1类: Serious eye damage/eye irritation – Category 1
 严重眼睛损伤/眼刺激 类别2B: Serious eye damage/eye irritation – Category 2B
 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
 特定靶器官系统毒性(单次接触) 第1类: Specific target organ toxicity (single exposure) – Category 1

CN

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 14.06.2017

Herziening van: 14.06.2017

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

- **1.1 Productidentificatie**
- **Handelsnaam:** Formaldehyde, Reagent, A.C.S.
- **Artikelnummer:** 15680, 15681, 15686, 15682, 15686-500
- **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:**
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**



GHS02 vlam

Flam. Liq. 3 H226 Ontvlambare vloeistof en damp.



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.

STOT SE 1 H370 Veroorzaakt schade aan organen.



GHS05 corrosie

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

Eye Dam. 1 H318 Veroorzaakt ernstig oogletsel.

(Vervolg op blz. 2)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 14.06.2017

Herziening van: 14.06.2017

Handelsnaam: Formaldehyde, Reagent, A.C.S.

(Vervolg van blz. 1)



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



GHS02

GHS05

GHS06

GHS08

GHS07

· Signaalwoord Gevaar

· Gevaaraanduidende componenten voor de etikettering:

formaldehyde
 methanol

· Gevarenaanduidingen

H226 Ontvlambare vloeistof en damp.
 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.
 H370 Veroorzaakt schade aan organen.
 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).
 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.

(Vervolg op blz. 3)

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(Vervolg van blz. 2)

· Gevaarlijke inhoudstoffen:		
CAS: 50-00-0 EINECS: 200-001-8	formaldehyde 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%
CAS: 67-56-1 EINECS: 200-659-6	methanol Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	10-25%

· **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. Grottere 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 brandweelieden**· **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.

(Vervolg op blz. 4)

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- **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.
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:**
Beschermen tegen hitte.
Maatregelen treffen tegen ontlading van statische elektriciteit.
Ademhalingstoestellen 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.
Tegen hitte en directe zonnestrallen beschermen.
- **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

67-56-1 methanol

WGW	Lange termijn waarde: 133 mg/m ³ , 100 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.

(Vervolg op blz. 5)

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- **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 chemicaliën-mengsel 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 het gebruik worden getest.

- **Doordringingstijd van het handschoenmateriaal**

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

- **Oogbescherming:**

Veiligheidsbril



Nauw aansluitende veiligheidsbril

RUBRIEK 9: Fysische en chemische eigenschappen

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

- **Algemene gegevens**

- **Voorkomen:**

Vorm:	Vloeistof
Kleur:	Niet bepaald.
Geur:	Sterk
Geurdrempelwaarde:	Niet bepaald.

- **pH-waarde bij 20 °C:** 7

- **Toestandsverandering**

Smelt-/vriespunt:	Niet bepaald.
Beginkookpunt en kooktraject:	64 °C

- **Vlampunt:** 60 °C

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

- **Ontstekingsstemperatuur:** ~300 °C

- **Ontledingstemperatuur:** Niet bepaald.

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

- **Ontploffingseigenschappen:** Niet bepaald.

- **Ontploffingsgrenzen:**

Onderste:	5,5 Vol %
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(Vervolg op blz. 6)

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(Vervolg van blz. 5)

Bovenste:	73,0 Vol %
· Dampspanning bij 20 °C:	128 hPa
· Dichtheid bij 20 °C:	0,9045 g/cm ³
· 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:	49,0 %
Water:	51,0 %
VOC (EG)	49,00 %
· 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)
67-56-1 methanol		
Oraal	LD50	5628 mg/kg (rat)
Dermaal	LD50	15800 mg/kg (rabbit)

- **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.

(Vervolg op blz. 7)

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- **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**
Veroorzaakt schade aan organen.
- **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.
- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL): Z(1) niet afbreekbare stoffen met gevaarlijke eigenschappen voor mens en milieu (carcinogeniteit/mutageniteit/ reprotoxiciteit/bioaccumulerend 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**
- **ADR, IMDG, IATA** UNI198
- **14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN**
- **ADR** 1198 FORMALDEHYDE, OPLOSSING, BRANDBAAR
- **IMDG, IATA** FORMALDEHYDE SOLUTION, FLAMMABLE

(Vervolg op blz. 8)

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· **14.3 Transportgevarenklasse(n)**

· **ADR**



· **klasse** 3 Brandbare vloeistoffen
 · **Etiket** 3+8

· **IMDG**



· **Class** 3 Brandbare vloeistoffen
 · **Label** 3/8

· **IATA**



· **Class** 3 Brandbare vloeistoffen
 · **Label** 3 (8)

· **14.4 Verpakkingsgroep:**

· **ADR, IMDG, IATA** III

· **14.5 Milieugevaren:** Niet bruikbaar.

· **14.6 Bijzondere voorzorgen voor de gebruiker** Waarschuwing: Brandbare vloeistoffen

· **Kemler-getal:** 38

· **EMS-nummer:** F-E,S-C

· **Stowage Category** A

· **Stowage Code** SW2 Clear of living quarters.

· **14.7 Vervoer in bulk overeenkomstig bijlage II bij**

Marpol en de IBC-code Niet bruikbaar.

· **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** D/E

· **IMDG**

· **Limited quantities (LQ)** 5L

· **Excepted quantities (EQ)** Code: E0

Not permitted as Excepted Quantity

(Vervolg op blz. 9)

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(Vervolg van blz. 8)

· VN "Model Regulation":	UN 1198 FORMALDEHYDE, OPLOSSING, BRANDBAAR, 3 (8), III
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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
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· **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**

67-56-1	methanol	IB
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· **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** formaldehyde, methanol

· **Seveso-categorie**

H2 ACUUT TOXISCH

P5c ONTVLAMBARE VLOEISTOFFEN

· **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

· **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 Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

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**

H225 Licht ontvlambare vloeistof en damp.

H301 Giftig bij inslikken.

H302 Schadelijk bij inslikken.

H311 Giftig bij contact met de huid.

H312 Schadelijk bij contact met de huid.

H314 Veroorzaakt ernstige brandwonden en oogletsel.

H315 Veroorzaakt huidirritatie.

H317 Kan een allergische huidreactie veroorzaken.

(Vervolg op blz. 10)

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Herziening van: 14.06.2017

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(Vervolg van blz. 9)

H331 Giftig bij inademing.
 H332 Schadelijk bij inademing.
 H341 Verdacht van het veroorzaken van genetische schade.
 H350 Kan kanker veroorzaken.
 H370 Veroorzaakt schade aan organen.

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
 Flam. Liq. 2: Ontvlambare vloeistoffen – Categorie 2
 Flam. Liq. 3: Ontvlambare vloeistoffen – Categorie 3
 Acute Tox. 3: Acute toxiciteit – Categorie 3
 Acute Tox. 4: Acute toxiciteit – Categorie 4
 Skin Corr. 1B: Huidcorrosie/-irritatie – Categorie 1B
 Skin Irrit. 2: Huidcorrosie/-irritatie – Categorie 2
 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 1: Specifieke doelorgaantoxiciteit bij eenmalige blootstelling – Categorie 1

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 14.06.2017

Révision: 14.06.2017

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

- **1.1 Identificateur de produit**
- **Nom du produit:** Formaldehyde, Reagent, A.C.S.
- **Code du produit:** 15680, 15681, 15686, 15682, 15686-500
- **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**
- **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**



GHS02 flamme

Flam. Liq. 3 H226 Liquide et vapeurs inflammables.



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.

STOT SE 1 H370 Risque avéré d'effets graves pour les organes.



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.

(suite page 2)

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Révision: 14.06.2017

Nom du produit: Formaldéhyde, Reagent, A.C.S.

(suite de la page 1)

Pictogrammes de danger

Mention d'avertissement Danger
Composants dangereux déterminants pour l'étiquetage:

Formaldéhyde
méthanol

Mentions de danger

- H226 Liquide et vapeurs inflammables.
 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.
 H370 Risque avéré d'effets graves pour les organes.
 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).
 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 EINECS: 200-001-8	Formaldéhyde 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%
CAS: 67-56-1 EINECS: 200-659-6	méthanol Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	10-25%

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

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RUBRIQUE 4: Premiers secours

· **4.1 Description des premiers secours**

· **Remarques générales:**

Enlever immédiatement les vêtements contaminés par le produit.

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.

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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.
Ouvrir et manipuler les récipients avec précaution.
Eviter la formation d'aérosols.
- **Préventions des incendies et des explosions:**
Tenir à l'abri de la chaleur.
Prendre des mesures contre les charges électrostatiques.
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.
Protéger de la forte chaleur et du rayonnement direct du soleil.
- **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
-----	---

67-56-1 méthanol

VME	Valeur momentanée: 1300 mg/m ³ , 1000 ppm Valeur à long terme: 260 mg/m ³ , 200 ppm risque de pénétration percutanée, (11)
-----	--

- **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.

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· **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.

· **Protection des yeux:**

Lunettes de protection



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:	Non déterminé.
Odeur:	Forte
Seuil olfactif:	Non déterminé.

· **valeur du pH à 20 °C:** 7

· **Changement d'état**

Point de fusion/point de congélation:	Non déterminé.
Point initial d'ébullition et intervalle d'ébullition:	64 °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:	5,5 Vol %
Supérieure:	73,0 Vol %

· **Pression de vapeur à 20 °C:** 128 hPa

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· Densité à 20 °C:	0,9045 g/cm ³
· 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:	49,0 %
Eau:	51,0 %
VOC (CE)	49,00 %
· 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)
------	------	------------------

67-56-1 méthanol

Oral	LD50	5628 mg/kg (rat)
Dermique	LD50	15800 mg/kg (lapin)

- **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.

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- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagenicité 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**
Risque avéré d'effets graves pour les organes.
- **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.
- **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 | |
| · ADR, IMDG, IATA | UN1198 |
| · 14.2 Désignation officielle de transport de l'ONU | |
| · ADR | 1198 FORMALDÉHYDE EN SOLUTION
INFLAMMABLE |
| · IMDG, IATA | FORMALDEHYDE SOLUTION, FLAMMABLE |

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· **14.3 Classe(s) de danger pour le transport**

· **ADR**



· **Classe** 3 Liquides inflammables.
 · **Étiquette** 3+8

· **IMDG**



· **Class** 3 Liquides inflammables.
 · **Label** 3/8

· **IATA**



· **Class** 3 Liquides inflammables.
 · **Label** 3 (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: Liquides inflammables.

· **Indice Kemler:**

38

· **No EMS:**

F-E,S-C

· **Stowage Category**

A

· **Stowage Code**

SW2 Clear of living quarters.

· **14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC**

Non applicable.

· **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**

D/E

· **IMDG**

· **Limited quantities (LQ)**

5L

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· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· "Règlement type" de l'ONU:	UN 1198 FORMALDÉHYDE EN SOLUTION INFLAMMABLE, 3 (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** Formaldéhyde, méthanol
- **Catégorie SEVESO**
H2 TOXICITÉ AIGÜE
P5c LIQUIDES INFLAMMABLES
- **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
- **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**
H225 Liquide et vapeurs très inflammables.
H301 Toxique en cas d'ingestion.
H302 Nocif en cas d'ingestion.
H311 Toxique par contact cutané.
H312 Nocif par contact cutané.
H314 Provoque des brûlures de la peau et des lésions oculaires graves.
H315 Provoque une irritation cutanée.
H317 Peut provoquer une allergie cutanée.
H331 Toxique par inhalation.
H332 Nocif par inhalation.
H341 Susceptible d'induire des anomalies génétiques.
H350 Peut provoquer le cancer.
H370 Risque avéré d'effets graves pour les organes.
- **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
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

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*LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Liquides inflammables – Catégorie 2**Flam. Liq. 3: Liquides inflammables – Catégorie 3**Acute Tox. 3: Toxicité aiguë – Catégorie 3**Acute Tox. 4: Toxicité aiguë – Catégorie 4**Skin Corr. 1B: Corrosion cutanée/irritation cutanée – Catégorie 1B**Skin Irrit. 2: Corrosion cutanée/irritation cutanée – Catégorie 2**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 1: Toxicité spécifique pour certains organes cibles (exposition unique) – Catégorie 1*

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Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 14.06.2017

überarbeitet am: 14.06.2017

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

- **1.1 Produktidentifikator**
- **Handelsname:** Formaldehyde, Reagent, A.C.S.
- **Artikelnummer:** 15680, 15681, 15686, 15682, 15686-500
- **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:**

Science Services GmbH
Unterhachinger Str. 75
81737 München Germany
Tel: +49(0)89 18 93 668-0
safety@scienceservices.de

24h Giftnotruf Munchen: +49 (0)89 19240
Toxikologische Abteilung der II. Medizinischen Klinik
rechts der Isar, Munchen. - www.toxinfo.org
- **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**



GHS02 Flamme

Flam. Liq. 3 H226 Flüssigkeit und Dampf entzündbar.



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.

STOT SE 1 H370 Schädigt die Organe.



GHS05 Ätzwirkung

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

Eye Dam. 1 H318 Verursacht schwere Augenschäden.



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**



GHS02

GHS05

GHS06

GHS08

GHS07

· **Signalwort Gefahr**

· **Gefahrbestimmende Komponenten zur Etikettierung:**

Formaldehyd

Methanol

· **Gefahrenhinweise**

H226 Flüssigkeit und Dampf entzündbar.

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.

H370 Schädigt die Organe.

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).

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.

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überarbeitet am: 14.06.2017

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ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

- **3.2 Chemische Charakterisierung: Gemische**
- **Beschreibung:** Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

- **Gefährliche Inhaltsstoffe:**

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	
CAS: 67-56-1	Methanol	10-25%
EINECS: 200-659-6	🔥 Flam. Liq. 2, H225; ☠ STOT SE 1, H370; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	

- **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.
 - Atenschutz 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.

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überarbeitet am: 14.06.2017

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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.
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:**
Vor Hitze schützen.
Maßnahmen gegen elektrostatische Aufladung treffen.
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.
Vor Hitze und direkter Sonnenbestrahlung schützen.
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** Entzündbare Flüssigkeiten
- **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(1);AGS, Sh, Y, X
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überarbeitet am: 14.06.2017

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67-56-1 Methanol

AGW Langzeitwert: 270 mg/m³, 200 ml/m³
4(II);DFG, EU, H, Y

· Bestandteile mit biologischen Grenzwerten:

67-56-1 Methanol

BGW 30 mg/l
Untersuchungsmaterial: Urin
Probennahmezeitpunkt: bei Langzeitexposition: Nach mehreren vorangegangenen Schichten,
Expositionsende bzw. Schichtende
Parameter: Methanol

· **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 umluftunabhängiges Atemschutzgerät verwenden.

· Handschutz:



Schutzhandschuhe

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:

Schutzbrille



Dichtschließende Schutzbrille

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überarbeitet am: 14.06.2017

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ABSCHNITT 9: Physikalische und chemische Eigenschaften

· 9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften

· Allgemeine Angaben

· Aussehen:

Form:	Flüssigkeit
Farbe:	Nicht bestimmt.
Geruch:	Stark
Geruchsschwelle:	Nicht bestimmt.

· pH-Wert bei 20 °C: 7

· Zustandsänderung

Schmelzpunkt/Gefrierpunkt:	Nicht bestimmt.
Siedebeginn und Siedebereich:	64 °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:	5,5 Vol %
Obere:	73,0 Vol %

· Dampfdruck bei 20 °C: 128 hPa

· Dichte bei 20 °C: 0,9045 g/cm³

· Relative Dichte: Nicht bestimmt.

· Dampfichte: Nicht bestimmt.

· Verdampfungsgeschwindigkeit: Nicht bestimmt.

· Löslichkeit in / Mischbarkeit mit

Wasser: Vollständig mischbar.

· Verteilungskoeffizient: n-Octanol/Wasser: Nicht bestimmt.

· Viskosität:

Dynamisch:	Nicht bestimmt.
Kinematisch:	Nicht bestimmt.

· Lösemittelgehalt:

Organische Lösemittel:	49,0 %
Wasser:	51,0 %
VOC (EU)	49,00 %

· 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.

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- **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)
------	------	------------------

67-56-1 Methanol

Oral	LD50	5628 mg/kg (rat)
------	------	------------------

Dermal	LD50	15800 mg/kg (rabbit)
--------	------	----------------------

· 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

Schädigt die Organe.

· 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): 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.

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überarbeitet am: 14.06.2017

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- **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

- | | |
|---|--------------------------------------|
| 14.1 UN-Nummer | UN1198 |
| ADR, IMDG, IATA | |
| 14.2 Ordnungsgemäße UN-Versandbezeichnung | 1198 FORMALDEHYDLÖSUNG, ENTZÜNDBAR |
| ADR | FORMALDEHYDE SOLUTION, FLAMMABLE |
| IMDG, IATA | |
| 14.3 Transportgefahrenklassen | |
| ADR | |
|  | |
| Klasse | 3 Entzündbare flüssige Stoffe |
| Gefahrzettel | 3+8 |
| | |
| IMDG | |
|  | |
| Class | 3 Entzündbare flüssige Stoffe |
| Label | 3/8 |
| | |
| IATA | |
|  | |
| Class | 3 Entzündbare flüssige Stoffe |
| Label | 3 (8) |
| 14.4 Verpackungsgruppe | III |
| ADR, IMDG, IATA | |
| 14.5 Umweltgefahren: | Nicht anwendbar. |
| 14.6 Besondere Vorsichtsmaßnahmen für den Verwender | Achtung: Entzündbare flüssige Stoffe |

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überarbeitet am: 14.06.2017

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- **Kemler-Zahl:** 38
- **EMS-Nummer:** F-E,S-C
- **Stowage Category** A
- **Stowage Code** SW2 Clear of living quarters.

· **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** D/E

- **IMDG**
- **Limited quantities (LQ)** 5L
- **Excepted quantities (EQ)** Code: E0
Not permitted as Excepted Quantity

- **UN "Model Regulation":** UN 1198 FORMALDEHYDLÖSUNG, ENTZÜNDBAR, 3 (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** Formaldehyd, Methanol
- **Seveso-Kategorie**
H2 AKUT TOXISCH
P5c ENTZÜNDBARE FLÜSSIGKEITEN
- **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

· **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	51,0
I	49,0

· **Wassergefährdungsklasse: WGK 2 (Selbsteinstufung):** 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**

- H225 Flüssigkeit und Dampf leicht entzündbar.
- H301 Giftig bei Verschlucken.
- H302 Gesundheitsschädlich bei Verschlucken.
- H311 Giftig bei Hautkontakt.
- H312 Gesundheitsschädlich bei Hautkontakt.
- H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.
- H315 Verursacht Hautreizungen.
- H317 Kann allergische Hautreaktionen verursachen.
- H331 Giftig bei Einatmen.
- H332 Gesundheitsschädlich bei Einatmen.
- H341 Kann vermutlich genetische Defekte verursachen.
- H350 Kann Krebs erzeugen.
- H370 Schädigt die Organe.

· **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
- Flam. Liq. 2: Entzündbare Flüssigkeiten – Kategorie 2
- Flam. Liq. 3: Entzündbare Flüssigkeiten – Kategorie 3
- Acute Tox. 3: Akute Toxizität – Kategorie 3
- Acute Tox. 4: Akute Toxizität – Kategorie 4
- Skin Corr. 1B: Hautreizende/-ätzende Wirkung – Kategorie 1B
- Skin Irrit. 2: Hautreizende/-ätzende Wirkung – Kategorie 2
- 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 1: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 1

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 14.06.2017

Revisione: 14.06.2017

SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** Formaldehyde, Reagent, A.C.S.

· **Articolo numero:** 15680, 15681, 15686, 15682, 15686-500

· **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:**

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**



GHS02 fiamma

Flam. Liq. 3 H226 Liquido e vapori infiammabili.



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.

STOT SE 1 H370 Provoca danni agli organi.



GHS05 corrosione

Skin Corr. 1B H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

Eye Dam. 1 H318 Provoca gravi lesioni oculari.

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GHS07

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**



GHS02

GHS05

GHS06

GHS08

GHS07

· **Avvertenza Pericolo**

· **Componenti pericolosi che ne determinano l'etichettatura:**

formaldeide
metanolo

· **Indicazioni di pericolo**

H226 Liquido e vapori infiammabili.
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.
H370 Provoca danni agli organi.
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).
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.

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· Sostanze pericolose:		
CAS: 50-00-0 EINECS: 200-001-8	formaldeide 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%
CAS: 67-56-1 EINECS: 200-659-6	metanolo Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	10-25%

· **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).

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- 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.
 - 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:**
Proteggere dal calore.
Adottare provvedimenti contro cariche elettrostatiche.
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.
Proteggere dal calore e dai raggi diretti del sole.
- **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
-----	---

67-56-1 metanolo

TWA	Valore a breve termine: 328 mg/m ³ , 250 ppm Valore a lungo termine: 262 mg/m ³ , 200 ppm Cute, IBE
VL	Valore a lungo termine: 260 mg/m ³ , 200 ppm Pelle

· **Componenti con valori limite biologici:**

67-56-1 metanolo

IBE	15 mg/l Campioni: urine Momento del prelievo: a fine turno Indicatore biologico: metanolo
-----	--

· **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.

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- **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.

- **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



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: | Non definito. |
| Odore: | Forte |
| Soglia olfattiva: | Non definito. |

· valori di pH a 20 °C:	7
--------------------------------	---

- **Cambiamento di stato**
- | | |
|---|---------------|
| Punto di fusione/punto di congelamento: | Non definito. |
| Punto di ebollizione iniziale e intervallo di ebollizione: | 64 °C |

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· 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:	5,5 Vol %
Superiore:	73,0 Vol %
· Tensione di vapore a 20 °C:	128 hPa
· Densità a 20 °C:	0,9045 g/cm ³
· 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.
Cinematica:	Non definito.
· Tenore del solvente:	
Solventi organici:	49,0 %
Acqua:	51,0 %
VOC (CE)	49,00 %
· 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.

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IT

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· Valori LD/LC50 rilevanti per la classificazione:		
50-00-0 formaldeide		
Orale	LD50	>200 mg/kg (rat)
67-56-1 metanolo		
Orale	LD50	5628 mg/kg (rat)
Cutaneo	LD50	15800 mg/kg (rabbit)

- **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**
Provoca danni agli organi.
- **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.

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.

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· **Detergente consigliato:** Acqua eventualmente con l'aggiunta di detersivi.

SEZIONE 14: Informazioni sul trasporto

· **14.1 Numero ONU**

· **ADR, IMDG, IATA**

UN1198

· **14.2 Nome di spedizione dell'ONU**

· **ADR**

· **IMDG, IATA**

1198 FORMALDEIDE IN SOLUZIONE INFIAMMABILE
FORMALDEHYDE SOLUTION, FLAMMABLE

· **14.3 Classi di pericolo connesso al trasporto**

· **ADR**



· **Classe**

· **Etichetta**

3 Liquidi infiammabili
3+8

· **IMDG**



· **Class**

· **Label**

3 Liquidi infiammabili
3/8

· **IATA**



· **Class**

· **Label**

3 Liquidi infiammabili
3 (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**

· **Numero Kemler:**

· **Numero EMS:**

· **Stowage Category**

· **Stowage Code**

Attenzione: Liquidi infiammabili

38

F-E,S-C

A

SW2 Clear of living quarters.

· **14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC**

Non applicabile.

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· 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**

D/E

· IMDG

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

· **UN "Model Regulation":**

UN 1198 FORMALDEIDE IN SOLUZIONE INFIAMMABILE,
3 (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 formaldeide, metanolo**

· **Categoria Seveso**

H2 TOSSICITÀ ACUTA

P5c LIQUIDI INFIAMMABILI

· **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**

· **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	49,0

· **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**

H225 Liquido e vapori facilmente infiammabili.

H301 Tossico se ingerito.

H302 Nocivo se ingerito.

H311 Tossico per contatto con la pelle.

H312 Nocivo per contatto con la pelle.

H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

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*H315 Provoca irritazione cutanea.**H317 Può provocare una reazione allergica cutanea.**H331 Tossico se inalato.**H332 Nocivo se inalato.**H341 Sospettato di provocare alterazioni genetiche.**H350 Può provocare il cancro.**H370 Provoca danni agli organi.***· 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**Flam. Liq. 2: Liquidi infiammabili – Categoria 2**Flam. Liq. 3: Liquidi infiammabili – Categoria 3**Acute Tox. 3: Tossicità acuta – Categoria 3**Acute Tox. 4: Tossicità acuta – Categoria 4**Skin Corr. 1B: Corrosione/irritazione della pelle – Categoria 1B**Skin Irrit. 2: Corrosione/irritazione della pelle – Categoria 2**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 1: Tossicità specifica per organi bersaglio (esposizione singola) – Categoria 1*

물질안전보건자료 GHS에 따라

기압점: 2017.06.14

개정: 2017.06.14

1 화학제품과 회사에 관한 정보

- **제품 식별자**
- **제품명:** Formaldehyde, Reagent, A.C.S.
- **상품번호:** 15680, 15681, 15686, 15682, 15686-500
- **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:**
 Samchang Commercial Co., Ltd.
 Yeo Eui Do
 PO Box 1110
 Seoul, Korea
 Tel: 82 2 703 3040
 Fax: 82 2 717 3298
- **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**



화염

인화성 액체 - 구분 3

H226 인화성 액체 및 증기



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

특정표적장기 독성 - 1회 노출 - 구분 1 H370 신체 중에 손상을 일으킴



부식

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

(2 쪽에 계속)

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기압점: 2017.06.14

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(1 쪽부터계속)

피부 과민성 - 구분 1

H317 알레르기성 피부 반응을 일으킬 수 있음

- 라벨표기 요소
- GHS 라벨 요소
- 그림문자



GHS02 GHS05 GHS06 GHS08

- 신호어 위험
- 상표상에명확히위험성이표시된성분:

formaldehyde
Methyl Alcohol

- 유해.위험 문구
- 인화성 액체 및 증기
- 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
- 신체 중에 손상을 일으킴

- 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.
- 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	formaldehyde ⚠ 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	25-50%
67-56-1	Methyl Alcohol ⚠ 인화성 액체 - 구분 2, H225; ⚠ 특정표적장기 독성 - 1회 노출 - 구분 1, H370; ⚠ 급성 독성 - 경구 - 구분 4, H302; ⚠ 급성 독성 - 경피 - 구분 4, H312; ⚠ 급성 독성 - 흡입 - 구분 4, H332; ⚠ 심한 눈 손상성/눈 자극성 - 구분 2, H319	10-25%

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(3 쪽에계속)

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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 씻어내고나서, 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.
 조심스럽게용기를개봉하거나취급한다.
 연무질이형성되는것을피한다.
- **화재 및 폭발 사고 예방대책에 관한 정보:**
 열로부터보호한다.
 정 전기 의 충 전 으로부터 보호한다.
 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
- **보 관 조 건 에 관 한 추 가 적 인 정 보:**
 용기를새지않게밀폐한채보관한다.
 열이나직사광선으로부터보호한다.
- **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 formaldehyde	
TLV (KR)	단기간의값: 1.5 mg/m ³ , 1 ppm 장기간의값: 0.75 mg/m ³ , 0.5 ppm
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
67-56-1 Methyl Alcohol	
TLV (KR)	단기간의값: 310 mg/m ³ , 250 ppm 장기간의값: 260 mg/m ³ , 200 ppm Skin
IOELV (EU)	장기간의값: 260 mg/m ³ , 200 ppm Skin
PEL (US)	장기간의값: 260 mg/m ³ , 200 ppm

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REL (US)	단기간의값: 325 mg/m ³ , 250 ppm 장기간의값: 260 mg/m ³ , 200 ppm Skin
TLV (US)	단기간의값: 328 mg/m ³ , 250 ppm 장기간의값: 262 mg/m ³ , 200 ppm Skin; BEI

· **추가 정보:** 제조할 당시에 유효한 목록을 기초로 사용했다.

· **노출 통제**

· **개인 보호구**

· **일반적보호조치및위생조치:**

· 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.

· 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.

· 휴식 전이나 작업이 끝날때마다 손을 씻는다.

· 방호복은 따로 보관한다.

· 눈과의 접촉을 피한다.

· 눈과 피부와의 접촉을 피한다.

· **호흡기 보호:**

· 단 시간 또는 경미한 오염의 경우에는 호흡여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡보호장비를 사용한다.

· **손 보호:**



보호용 장갑

장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.

테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다.

투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· **장갑의재료**

· 적합한장갑의선정은재질차이뿐만아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도다르게선정되어야한다. 제품은다양한재료로부터의조제로이루어지는것이기때문에, 장갑재질의안정성은사전예측되어질수있는것이아니고, 반드시사용전에 (그안전성이) 체크되어야한다.

· **장갑재료의 투과시간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

· **눈 보호:**

· 보호안경



팩조이는보안경

9 물리화학적 특성

· **기본 물리 및 화학적 특성에 대한 정보**

· **일반정보**

· **외형**

· 물리적 상태: 액체

· 색: 알맞지않다.

· 냄새: 강력한

· 후각역치: 알맞지않다.

· pH 의경우 20 °C: 7

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· 상태변화 녹는점/어는점: 초기 끓는점과 끓는점 범위:	맞지않는 64 °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: 위로:	5.5 Vol % 73.0 Vol %
· 증기압 의경우 20 °C:	128 hPa
· 밀도 의경우 20 °C: · 비중: · 증기밀도: · 증발 속도:	0.9045 g/cm ³ 알맞지않다. 알맞지않다. 알맞지않다.
· 용해도: 물:	완전히혼합할수있는
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도: 역학성: 동점성:	알맞지않다. 알맞지않다.
· 용매내용물 유기용매: 물: VOC (EU) · 기타 정보	49.0 % 51.0 % 49.00 % 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.

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11 독성에 관한 정보

- 독성학적 영향에 대한 정보
- 급성 독성:

· LD/LC50-수치에 따른 분류:		
50-00-0 formaldehyde		
구강의	LD50	>200 mg/kg (rat)
67-56-1 Methyl Alcohol		
구강의	LD50	5628 mg/kg (rat)
피부의	LD50	15800 mg/kg (rabbit)

- **일차적 자극 효과:**
- **피부 부식성 또는 자극성:** 피부와점막에강한부식작용.
- **심한 눈 손상 또는 자극성:**
강한부식작용
심각한안구상처의위험이있는강한자극
- **감각화:** 피부접촉을통하여감각화가능성이있다.
- **추가적인 독성에 관한 정보:**
이제품은유럽공동체의공동분류원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전준비에대하여제시하고있다.
독성의
건강에해로운
부식작용의
자극적인
삼킬경우식도나위등의내장기관벽에상처를주는위험과 마찬가지로입주변이나구강에강한부식작용을한다
압을유발하는
- **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, 하천으로또는하수도망에도달하지않게한다.
회석시키지않은채또는중화시키지않은채하수도나배수로에도달하지않게해야한다.
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.

KR

(8 쪽에계속)

물질안전보건자료

GHS에 따라

기압점: 2017.06.14

개정: 2017.06.14




제품명: Formaldehyde, Reagent, A.C.S.

(7 쪽부터계속)

13 폐기시 주의사항

- 폐기물 처리 방법
- 권고: 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- 비위생적 포장:
- 권고: 당국의지침에입각한쓰레기처리.
- 추천 세정제: 경우에따라서세제가첨가된물

14 운송에 필요한 정보

· 유엔 번호 · ADR, IMDG, IATA	UN1198
· UN 적정 선적명 · ADR · IMDG, IATA	1198 FORMALDEHYDE SOLUTION, FLAMMABLE FORMALDEHYDE SOLUTION, FLAMMABLE
· 교통 위험 클래스 · ADR	
	
· 등급 · 위험물 라벨	3 발화성용액 3+8
· IMDG	
	
· Class · Label	3 발화성용액 3/8
· IATA	
	
· Class · Label	3 발화성용액 3 (8)
· 용기등급 · ADR, IMDG, IATA	III
· 환경적 유해물질:	해당사항 없음.
· 이용자 특별 예방조치 · 위험 코드: · EMS-번호: · Stowage Category	경고: 발화성용액 38 F-E,S-C A

(9 쪽에계속)

물질안전보건자료

GHS에 따라

기압점: 2017.06.14

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(8 쪽부터계속)

· Stowage Code	SW2 Clear of living quarters.
· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송	해당사항 없음.
· 운 송/추가 정보:	
· ADR · 한정 수량 (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· 운송 구분 · 터널 제한 코드	3 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	
	5L Code: E0 Not permitted as Excepted Quantity
· UN "모범 규제":	UN 1198 FORMALDEHYDE SOLUTION, FLAMMABLE, 3 (8), III

15 법적 규제현황

· 산업안전보건법에 의한 규제:		
· 제조 등 금지물질:	어떠한내용물도 목록화되어있지않다	
· 허가대상물질:	어떠한내용물도 목록화되어있지않다	
· 관리대상유해물질:	50-00-0 formaldehyde 67-56-1 Methyl Alcohol	
· 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률		
· Korean Existing Chemical Inventory		
50-00-0 formaldehyde		KE-17074
67-56-1 Methyl Alcohol		KE-23193
7732-18-5 Deionized Water, Reagent Grade A.C.S.		KE-35400
· 화학물질관리법		
· 사고대비물질		
50-00-0 formaldehyde		
67-56-1 Methyl Alcohol		
· 금지물질		
어떠한내용물도 목록화 되어있지않다		
· 제한물질		
50-00-0 formaldehyde		
· 유독물질		
50-00-0 formaldehyde		

(10 쪽에계속)

물질안전보건자료

GHS에 따라

기압점: 2017.06.14

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제품명: Formaldehyde, Reagent, A.C.S.

(9 쪽부터계속)

67-56-1	Methyl Alcohol
· 허가물질	
50-00-0	formaldehyde
67-56-1	Methyl Alcohol

· GHS 라벨 요소

본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

· 그림문자



· 신호어 위험

· 상표상에명확히위험성이표시된성분:

formaldehyde
Methyl Alcohol

· 유해.위험 문구

인화성 액체 및 증기
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
신체 중에 손상을 일으킴

· 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.
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: 2017.06.14

· 개정 횟수 및 최종 개정일자: 1 / 2017.06.14

· 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
ELINCS: European List of Notified Chemical Substances

(11 쪽에계속)

물질안전보건자료

GHS에 따라

기압점: 2017.06.14

개정: 2017.06.14

제품명: Formaldehyde, Reagent, A.C.S.

(10 쪽부터계속)

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

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Helaiian Data Keselamatan

menurut P.U.(A) 310/2013

Tarikh cetak 14.06.2017

Disemak semula pada 14.06.2017

1 Pengenalan bahan kimia dan pembekal

- **Pengenal pasti produk**
- **Nama dagang:** Formaldehyde, Reagent, A.C.S.
- **Nombor artikel:** 15680, 15681, 15686, 15682, 15686-500
- **Kegunaan yang disarankan bagi bahan dan sekatan penggunaan** Tiadak maklumat lanjut yang diperoleh.
- **Penggunaan bahan/sediaan** Bahan kimia makmal
- **Perincian pembekal** risalah data keselamatan
- **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**



Nyalaan

Cec. M. Bkr 3 H226 Cecair dan wap mudah terbakar.



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.

STOT SE 1 H370 Menyebabkan kerosakan organ.



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)

Helaiian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 14.06.2017

Disemak semula pada 14.06.2017

Nama dagang: Formaldehyde, Reagent, A.C.S.

(Sambungan halaman 1)

· **Piktogram hazard**



· **Perkataan isyarat Bahaya**

· **Komponen pelabelan yang menentukan bahaya:**

Formaldehid

Metanol

· **Pernyataan hazard**

Cecair dan wap mudah terbakar.

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.

Menyebabkan kerosakan organ.

· **Pernyataan langkah perlindungan**

Jauhkan daripada haba/percikan api/nyalaan terbuka/permukaan panas – Dilarang merokok.

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 ⚠ 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	25-50%
67-56-1	Metanol ⚠ Cec. M. Bkr 2, H225; ⚠ STOT SE 1, H370; ⚠ Toks. Akut 4, H302; Toks. Akut 4, H312; Toks. Akut 4, H332	10-25%

MY

(Bersambung ke halaman 3)

Helaian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 14.06.2017

Disemak semula pada 14.06.2017

Nama dagang: Formaldehyde, Reagent, A.C.S.

(Sambungan halaman 2)

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.

- **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 pepadaman kebakaran

- **Bahan pepadam api**

- **Agen pepadam 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 pepadam 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.

MY

(Bersambung ke halaman 4)

Helaian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 14.06.2017

Disemak semula pada 14.06.2017

Nama dagang: Formaldehyde, Reagent, A.C.S.

(Sambungan halaman 3)

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:**
Lindungi daripada haba.
Lindungi daripada cas-cas elektrostatik.
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.
- **Maklumat penyimpanan di dalam satu tempat penyimpanan yang biasa:** Tidak diperlukan.
- **Maklumat lanjut tentang syarat penyimpanan:**
Pastikan bekas sentiasa bertutup rapat.
Lindungi daripada haba dan pancaran terus cahaya matahari.
- **Kegunaan akhir yang khusus** Tiada maklumat lanjut yang diperoleh.

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/m ³ , 0.3 ppm
67-56-1 Metanol	
PEL	Nilai jangka panjang: 262 mg/m ³ , 200 ppm (kulit)

- **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.

(Bersambung ke halaman 5)

Helaiian Data Keselamatan menurut P.U.(A) 310/2013

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Nama dagang: Formaldehyde, Reagent, A.C.S.

(Sambungan halaman 4)

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 diperoleh pengeluar sarung tangan pelindung dan hendaklah dipatuhi.

• **Perlindungan mata:**

Kaca keselamatan



Gogal bertutup rapat

9 Sifat fizikal dan kimia

• **Maklumat tentang ciri fizik dan kimia**

• **Maklumat Am**

• **Rupa:**

Bentuk:

Cecair

Warna:

Tidak ditentukan.

• **Bau:**

Kuat

• **Ambang bau**

Tidak ditentukan.

• **Nilai pH pada 20 °C:**

7

• **Perubahan pada keadaan**

Takat lebur/takat beku

Tidak ditentukan.

Takat didih awal dan julat didih

64 °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:

5.5 Vol %

Atas:

73.0 Vol %

• **Tekanan wap pada 20 °C:**

128 hPa

• **Ketumpatan pada 20 °C:**

0.9045 g/cm³

• **Ketumpatan bandingan**

Tidak ditentukan.

• **Ketumpatan wap**

Tidak ditentukan.

• **Kadar penyejatan**

Tidak ditentukan.

(Bersambung ke halaman 6)

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(Sambungan halaman 5)

· 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:	49.0 %
Air:	51.0 %
· Maklumat lain	Tiada maklumat lanjut yang diperoleh.

10 Kestabilan dan kereaktifan

- **Kereaktifan** Tiada maklumat lanjut yang diperoleh.
- **Kestabilan kimia**
- **Penguraian termal/keadaan yang perlu dielakkan:** Tiada penguraian jika digunakan mengikut spesifikasi.
- **Kemungkinan tindak balas berbahaya** Tiada tindak balas berbahaya yang diketahui.
- **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)
------	------	------------------

67-56-1 Metanol

Oral	LD50	5628 mg/kg (rat)
Derma	LD50	15800 mg/kg (rabbit)

- **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.

(Bersambung ke halaman 7)

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(Sambungan halaman 6)

- **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 diperolehi.
- **Keterusan dan keterdegradasikan** Tiada maklumat lanjut yang diperolehi.
- **Kelakuan dalam sistem alam sekitar:**
- **Potensi bioakumulatif** Tiada maklumat lanjut yang diperolehi.
- **Mobiliiti di dalam tanah** Tiada maklumat lanjut yang diperolehi.
- **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 saluran tanpa dicairkan 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 diperolehi.

13 Maklumat pelupusan

- **Kaedah rawatan sisa**
- **Syor:**
Tidak boleh dilupuskan bersama dengan sampah isi rumah. Jangan biarkan produk memasuki sistem pembetulan.
- **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** UN1198
- **Nama penghantaran UN yang betul**
- **ADR** 1198 FORMALDEHYDE SOLUTION, FLAMMABLE
- **IMDG, IATA** FORMALDEHYDE SOLUTION, FLAMMABLE

- **pengangkutan kelas bahaya**

- **ADR**



- **Kelas**

3 Cecair mudah terbakar.

(Bersambung ke halaman 8)



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(Sambungan halaman 7)

· Label	3+8
· IMDG	
	
· Class	3 Cecair mudah terbakar.
· Label	3/8
· IATA	
	
· Class	3 Cecair mudah terbakar.
· Label	3 (8)
· Kumpulan pembungkusan	
· ADR, IMDG, IATA	III
· Hazard persekitaran:	Tidak berkenaan
· Langkah perlindungan khas untuk pengguna	Amaran: Cecair mudah terbakar.
· Kod bahaya (Kemler):	38
· Nombor EMS:	F-E,S-C
· Stowage Category	A
· Stowage Code	SW2 Clear of living quarters.
· Pengangkutan dalam pukat 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)	5L
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· "Peraturan Model" UN:	UN 1198 FORMALDEHYDE SOLUTION, FLAMMABLE, 3 (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).

(Bersambung ke halaman 9)

MY

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(Sambungan halaman 8)

· **Piktogram hazard**



· **Perkataan isyarat Bahaya**

· **Komponen pelabelan yang menentukan bahaya:**

Formaldehid

Metanol

· **Pernyataan hazard**

Cecair dan wap mudah terbakar.

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.

Menyebabkan kerosakan organ.

· **Pernyataan langkah perlindungan**

Jauhkan daripada haba/percikan api/nyalaan terbuka/permukaan panas – Dilarang merokok.

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

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

Cec. M. Bkr 2: Cecair mudah terbakar – Kategori 2

(Bersambung ke halaman 10)

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(Sambungan halaman 9)

Cec. M. Bkr 3: Cecair mudah terbakar – Kategori 3
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
STOT SE 1: Ketoksikan organ sasaran khusus (pendedahan tunggal) – Kategori 1

-MY-

Ficha de datos de seguridad

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SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

· 1.1 Identificador del producto

· **Nombre comercial:** Formaldehyde, Reagent, A.C.S.

· **Número del artículo:** 15680, 15681, 15686, 15682, 15686-500

· **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:**

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**



GHS02 llama

Flam. Liq. 3 H226 Líquidos y vapores inflamables.



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.

STOT SE 1 H370 Provoca daños en los órganos.



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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(se continua en página 1)



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



GHS02

GHS05

GHS06

GHS08

GHS07

· Palabra de advertencia Peligro

· Componentes peligrosos a indicar en el etiquetaje:

formaldehído

metanol

· Indicaciones de peligro

H226 Líquidos y vapores inflamables.

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.

H370 Provoca daños en los órganos.

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).

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.

(se continua en página 3)

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Componentes peligrosos:

CAS: 50-00-0 EINECS: 200-001-8	formaldehído 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%
CAS: 67-56-1 EINECS: 200-659-6	metanol Flam. Liq. 2, H225; STOT SE 1, H370; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	10-25%

· **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:**

Limpicar 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).

(se continua en página 4)

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Utilizar un neutralizador.

Desechar el material contaminado como vertido según item 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.

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:**

Proteger del calor.

Tomar medidas contra las cargas electrostáticas.

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.

Proteger del calor y de la luz directa del sol.

· **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: 0,37 mg/m ³ , 0,3 ppm
	CIB, Sen, s

67-56-1 metanol

LEP	Valor de larga duración: 266 mg/m ³ , 200 ppm
	vía dérmica, VLB, VLI

· **Componentes con valores límite biológicos:**

67-56-1 metanol

VLB	15 mg/l
	Muestra: orina
	Momento de Muestero: Final de la jornada laboral
	Indicador Biológico: Metanol

· **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.

(se continua en página 5)

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(se continua en página 4)

· 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 / sustancia / 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.

· 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



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:

No determinado.

· Olor:

Intenso

· Umbral olfativo:

No determinado.

· valor pH a 20 °C:

7

· Cambio de estado

Punto de fusión/punto de congelación:

Indeterminado.

Punto inicial de ebullición e intervalo de ebullición: 64 °C

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Revisión: 14.06.2017

Nombre comercial: *Formaldehyde, Reagent, A.C.S.*

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· 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:	5,5 Vol %
Superior:	73,0 Vol %
· Presión de vapor a 20 °C:	128 hPa
· Densidad a 20 °C:	0,9045 g/cm ³
· Densidad relativa	No determinado.
· Densidad de vapor	No determinado.
· Tasa de evaporación:	No determinado.
· Solubilidad en / miscibilidad con agua:	Completamente mezclable.
· Coeficiente de reparto: n-octanol/agua:	No determinado.
· Viscosidad:	
Dinámica:	No determinado.
Cinemática:	No determinado.
· Concentración del disolvente:	
Disolventes orgánicos:	49,0 %
Agua:	51,0 %
VOC (CE)	49,00 %
· 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.

(se continua en página 7)

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(se continua en página 6)

· Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:		
50-00-0 formaldehído		
Oral	LD50	>200 mg/kg (rat)
67-56-1 metanol		
Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **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**
Provoca daños en los órganos.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **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.

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· **Producto de limpieza recomendado:** Agua, eventualmente añadiendo productos de limpieza.

SECCIÓN 14: Información relativa al transporte

· **14.1 Número ONU**
· **ADR, IMDG, IATA**

UN1198

· **14.2 Designación oficial de transporte de las Naciones Unidas**

· **ADR**

1198 FORMALDEHÍDO EN SOLUCIÓN, INFLAMABLE

· **IMDG, IATA**

FORMALDEHYDE SOLUTION, FLAMMABLE

· **14.3 Clase(s) de peligro para el transporte**

· **ADR**



· **Clase**

3 Líquidos inflamables

· **Etiqueta**

3+8

· **IMDG**



· **Class**

3 Líquidos inflamables

· **Label**

3/8

· **IATA**



· **Class**

3 Líquidos inflamables

· **Label**

3 (8)

· **14.4 Grupo de embalaje**

· **ADR, IMDG, IATA**

III

· **14.5 Peligros para el medio ambiente:**

No aplicable.

· **14.6 Precauciones particulares para los usuarios**

Atención: Líquidos inflamables

· **Número Kemler:**

38

· **Número EMS:**

F-E,S-C

· **Stowage Category**

A

· **Stowage Code**

SW2 Clear of living quarters.

· **14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC**

No aplicable.

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· **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**

D/E

· **IMDG**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

· **"Reglamentación Modelo" de la UNECE:**

UN 1198 FORMALDEHÍDO EN SOLUCIÓN,
INFLAMABLE, 3 (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 formaldehído, metanol**

· **Categoría Seveso**

H2 TOXICIDAD AGUDA

P5c LÍQUIDOS INFLAMABLES

· **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**

· **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**

H225 Líquido y vapores muy inflamables.

H301 Tóxico en caso de ingestión.

H302 Nocivo en caso de ingestión.

H311 Tóxico en contacto con la piel.

H312 Nocivo en contacto con la piel.

H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

H315 Provoca irritación cutánea.

H317 Puede provocar una reacción alérgica en la piel.

H331 Tóxico en caso de inhalación.

H332 Nocivo en caso de inhalación.

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*H341 Se sospecha que provoca defectos genéticos.**H350 Puede provocar cáncer.**H370 Provoca daños en los órganos.***· 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)**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**Flam. Liq. 2: Líquidos inflamables – Categoría 2**Flam. Liq. 3: Líquidos inflamables – Categoría 3**Acute Tox. 3: Toxicidad aguda – Categoría 3**Acute Tox. 4: Toxicidad aguda – Categoría 4**Skin Corr. 1B: Corrosión o irritación cutáneas – Categoría 1B**Skin Irrit. 2: Corrosión o irritación cutáneas – Categoría 2**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 1: Toxicidad específica en determinados órganos (exposición única) – Categoría 1*