analytichem

# Safety Data Sheet

according to Regulation (EC) No 1907/2006

**Formaldehyde 37% weight % solution a.r.**



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

### 1.1. Product identifier

Formaldehyde 37% weight % solution a.r.

UFI: 5P5C-X0W1-400C-WMJQ

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Use of the substance/mixture**

Reagents and laboratory chemicals
Only for laboratory and analysis purposes.

**Uses advised against**

Do not use for private purposes (household).

### 1.3. Details of the supplier of the safety data sheet

**Details of the supplier of the safety data sheet**

| | |
|---|---|
| Company name: | AnalytiChem Services, Unipessoal, Lda |
| Street: | Rua de Júlio Dinis 676 7º |
| Place: | N-4050-320 Porto |
| Telephone: | +351 226002917 |
| E-mail: | info@analytichem.com |
| Contact person: | SDS service department |
| E-mail: | SDS@analytichem.com |
| Internet: | www.analytichem.com |
| Responsible Department: | SDS service department |

**Supplier or manufacturer details**

| | |
|---|---|
| Company name: | AnalytiChem Belgium NV |
| Street: | Industriezone "De Arend" 2 |
| Place: | B-8210 Zedelgem |
| Telephone: | +32 50 28 83 20 |
| E-mail: | info.be@analytichem.com |
| Contact person: | SDS service department |
| E-mail: | SDS@analytichem.com |
| Responsible Department: | AnalytiChem:<br>EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20<br>EU-Germany: AnalytiChem Germany, Stempelstrasse 6, 47167 Duisburg, Germany, +49 203 51 94 – 200<br>EU-Netherlands: AnalytiChem Netherlands, Communicatieweg 7, 3641 SG Mijdrecht, The Netherlands, +31 297 286848<br>UK: AnalytiChem UK, Unit 7 Launton Business Center, Murdock Road, Bicester, OX26 4XB, England, +44 1869 355 500<br>USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378<br>Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701<br>Australia: ORE Research & Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333 |

### 1.4. Emergency telephone number:

+353 1 901 4670 (CHEMTREC)

**Further Information**

This product is a mixture. REACH Registration Number see section 3.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Regulation (EC) No 1272/2008**

Carc. 1B; H350
Muta. 2; H341
Acute Tox. 2; H330
Acute Tox. 3; H311
Acute Tox. 4; H302
Skin Corr. 1B; H314
Eye Dam. 1; H318
Skin Sens. 1; H317
STOT SE 1; H370 H335

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

**Regulation (EC) No 1272/2008**

**Hazard components for labelling**

formaldehyde
methanol

**Signal word:** Danger

**Pictograms:**

**Hazard statements**

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H330 | Fatal if inhaled. |
| H341 | Suspected of causing genetic defects. |
| H350 | May cause cancer. |
| H370 | Causes damage to organs. |
| EUH071 | Corrosive to the respiratory tract. |

**Precautionary statements**

| | |
|---|---|
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P280 | Wear protective gloves/protective clothing and eye protection/face protection. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or 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. |

**Special labelling**

Restricted to professional users.

### 2.3. Other hazards

No data available

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

**Chemical characterization**

Mixtures in aqueous solution

**Relevant ingredients**

| CAS No | Chemical name | | | Quantity |
|---|---|---|---|---|
| | EC No | Index No | REACH No | |
| | Classification (Regulation (EC) No 1272/2008) | | | |
| 50-00-0 | formaldehyde | | | 35 - < 40 % |
| | 200-001-8 | 605-001-00-5 | 01-2119488953-20 | |
| | Carc. 1B, Muta. 2, Acute Tox. 2, Acute Tox. 3, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1A, STOT SE 3; H350 H341 H330 H311 H301 H314 H318 H317 H335 EUH071 | | | |
| 67-56-1 | methanol | | | 10 - < 15 % |
| | 200-659-6 | 603-001-00-X | 01-2119433307-44 | |
| | Flam. Liq. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT SE 1; H225 H331 H311 H301 H370 | | | |

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

| CAS No | EC No | Chemical name | Quantity |
|---|---|---|---|
| | Specific Conc. Limits, M-factors and ATE | | |
| 50-00-0 | 200-001-8 | formaldehyde | 35 - < 40 % |
| | inhalation: LC50 = < 463 mg/l (vapours); inhalation: ATE 100 ppm (gases); dermal: ATE = 300 mg/kg; oral: ATE 500 mg/kg Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 5 - < 25 Eye Irrit. 2; H319: >= 5 - < 25 STOT SE 3; H335: >= 5 - 100 | | |
| 67-56-1 | 200-659-6 | methanol | 10 - < 15 % |
| | inhalation: LC50 = 128,2 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: ATE = 300 mg/kg; oral: LD50 = 6000 mg/kg STOT SE 1; H370: >= 10 - 100 STOT SE 2; H371: >= 3 - < 10 | | |

**Further Information**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**General information**

Self-protection of the first aider

**After inhalation**

Provide fresh air.

If breathing is irregular or stopped, administer artificial respiration.

Call a physician immediately.

**After contact with skin**

Wash immediately with: Water

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

Call a physician immediately.

**After contact with eyes**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Remove contact lenses, if present and easy to do. Continue rinsing.

**After ingestion**

Rinse mouth immediately and drink plenty of water.
Call a physician immediately.
If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

**4.2. Most important symptoms and effects, both acute and delayed**

Irritant
corrosive
Allergic reactions
Dyspnoea
Cough
Inebriation
Dizziness
Headache
Dizziness
Agitation
Headache
Spasms
Impairment of vision
Anaesthetic state
Risk of serious damage to eyes.

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

No data available

## SECTION 5: Firefighting measures

**5.1. Extinguishing media**

**Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

**Unsuitable extinguishing media**

no restriction

**5.2. Special hazards arising from the substance or mixture**

Combustible liquids
In case of warming:
Vapours are heavier than air, spread along floors and form explosive mixtures with air.
Hazardous combustion products
In case of fire may be liberated:
Nitrogen oxides (NOx)
Carbon dioxide ($CO_2$) Carbon monoxide

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.
In case of fire and/or explosion do not breathe fumes.
Avoid contact with skin, eyes and clothes.

**Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Move undamaged containers from immediate hazard area if it can be done safely.
Use water spray jet to protect personnel and to cool endangered containers.

## SECTION 6: Accidental release measures

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

**General advice**

Do not breathe vapour/aerosol.

**For non-emergency personnel**

Provide adequate ventilation.
Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Consult an expert
Do not breathe dust/fume/gas/mist/vapours/spray.

**For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.
Danger of explosion

### 6.3. Methods and material for containment and cleaning up

**For containment**

Cover drains.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Collect in closed and suitable containers for disposal.
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

**Other information**

Provide adequate ventilation.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

### 6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Advice on safe handling**

Avoid exposure - obtain special instructions before use.
Read label before use. Handle and open container with care.
When using do not eat, drink, smoke, sniff. Keep container tightly closed.
Use personal protection equipment. Use extractor hood (laboratory).
Do not breathe vapour/aerosol.
Provide adequate ventilation.

**Advice on protection against fire and explosion**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take action to prevent static discharges.

**Advice on general occupational hygiene**

Keep away from food, drink and animal feedingstuffs.
The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

**Further information on handling**

Take off immediately all contaminated clothing and wash it before reuse.
Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used.
Store in a place accessible by authorized persons only.

## 7.2. Conditions for safe storage, including any incompatibilities

**Requirements for storage rooms and vessels**

Keep in a cool, well-ventilated place.
Protect against: Light
Unsuitable container/equipment material: Metal

**Hints on joint storage**

Take national regulations into account.

**Further information on storage conditions**

Keep container tightly closed. Keep container dry.
Keep cool. Protect from sunlight.
storage temperature +15°C - +25°C

## 7.3. Specific end use(s)

Laboratory chemicals

# SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

**Occupational exposure limits**

| CAS No | Substance | ppm | mg/m³ | fib/cm³ | Category | Origin |
|---|---|---|---|---|---|---|
| 50-00-0 | Formaldehyde | 0.3 | 0.37 | | TWA (8 h) | |
| | | 0.6 | 0.738 | | STEL (15 min) | |
| 67-56-1 | Methyl alcohol | 200 | 260 | | TWA (8 h) | |

**Biological limit values**

| CAS No | Substance | Parameter | Value | Test material | Sampling time |
|---|---|---|---|---|---|
| 67-56-1 | Methanol | Methanol | 15 mg/L | Urine | End of shift |

**DNEL/DMEL values**

| CAS No | Substance | | | |
|---|---|---|---|---|
| DNEL type | | Exposure route | Effect | Value |
| 50-00-0 | formaldehyde | | | |
| Worker DNEL, long-term | | inhalation | systemic | 9 mg/m³ |
| Worker DNEL, long-term | | inhalation | local | 0,375 mg/m³ |
| Worker DNEL, long-term | | dermal | systemic | 240 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | systemic | 3,2 mg/m³ |
| Consumer DNEL, long-term | | inhalation | local | 0,1 mg/m³ |
| Consumer DNEL, long-term | | dermal | systemic | 102 mg/kg bw/day |
| Consumer DNEL, long-term | | oral | systemic | 4,1 mg/kg bw/day |
| Worker DNEL, acute | | inhalation | local | 0,75 mg/m³ |
| 67-56-1 | methanol | | | |
| Consumer DNEL, acute | | inhalation | systemic | 50 mg/m³ |
| Worker DNEL, long-term | | inhalation | systemic | 260 mg/m³ |
| Worker DNEL, acute | | inhalation | systemic | 260 mg/m³ |
| Worker DNEL, long-term | | inhalation | local | 260 mg/m³ |
| Worker DNEL, acute | | inhalation | local | 260 mg/m³ |
| Worker DNEL, long-term | | dermal | systemic | 40 mg/kg bw/day |
| Worker DNEL, acute | | dermal | systemic | 40 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | systemic | 50 mg/m³ |
| Consumer DNEL, long-term | | inhalation | local | 50 mg/m³ |
| Consumer DNEL, acute | | inhalation | local | 50 mg/m³ |
| Consumer DNEL, long-term | | dermal | systemic | 8 mg/kg bw/day |
| Consumer DNEL, acute | | dermal | systemic | 8 mg/kg bw/day |
| Consumer DNEL, long-term | | oral | systemic | 8 mg/kg bw/day |
| Consumer DNEL, acute | | oral | systemic | 8 mg/kg bw/day |

**PNEC values**

| CAS No | Substance |
|---|---|
| Environmental compartment | Value |
| 50-00-0 | formaldehyde |
| Freshwater | 0,44 mg/l |
| Freshwater (intermittent releases) | 4,44 mg/l |
| Marine water | 0,44 mg/l |
| Freshwater sediment | 2,3 mg/kg |
| Marine sediment | 2,3 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | 0,19 mg/l |
| Soil | 0,2 mg/kg |
| 67-56-1 | methanol |
| Freshwater | 20,8 mg/l |
| Freshwater (intermittent releases) | 1540 mg/l |
| Marine water | 2,08 mg/l |
| Freshwater sediment | 77 mg/kg |
| Marine sediment | 7,7 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | 100 mg/l |
| Soil | 100 mg/kg |

## 8.2. Exposure controls

**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

goggles

Face protection umbrella

**Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact
Trade name/designation: KCL 897 Butoject®
Recommended material: Butyl caoutchouc (butyl rubber) 0,3 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact
Trade name/designation: KCL 890 Vitoject®
Recommended material: FKM (fluoro rubber) 0,7 mm

Wearing time with occasional contact (splashes): > 145 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

**Skin protection**

Take off immediately all contaminated clothing and wash it before reuse.
Wear fire resistant or flame retardant clothing.
Wash hands and face before breaks and after work and take a shower if necessary.
Draw up and observe skin protection programme.

**Respiratory protection**

Respiratory protection necessary at: aerosol or mist formation
Filtering device with filter or ventilator filtering device of type: ABEK
The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Thermal hazards**

No data available

**Environmental exposure controls**

Do not allow to enter into surface water or drains.
Danger of explosion

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state: | Liquid |
| Colour: | colourless |
| Odour: | stinging |
| Odour threshold: | No data available |
| Melting point/freezing point: | < -15 °C |
| Boiling point or initial boiling point and boiling range: | 93-96 °C |
| Flammability: | No data available |
| Lower explosion limits: | No data available |
| Upper explosion limits: | No data available |
| Flash point: | 62 °C |
| Decomposition temperature: | No data available |
| pH-Value (at 20 °C): | 2,8 - 4 |
| Viscosity / kinematic: | No data available |
| Water solubility: | Soluble in: Water |

Solubility in other solvents

No data available

| | |
|---|---|
| Dissolution rate: | No data available |
| Partition coefficient n-octanol/water: | No data available |
| Dispersion stability: | No data available |
| Vapour pressure: | No data available |
| Vapour pressure: | No data available |
| Density: | 1,09 g/cm³ |
| Relative density: | No data available |
| Bulk density: | No data available |

| | |
|---|---|
| Relative vapour density: | No data available |
| Particle characteristics: | No data available |

### 9.2. Other information

**Information with regard to physical hazard classes**

Explosive properties

Danger of dust explosion.

| | |
|---|---|
| Sustained combustibility: | No data available |

Self-ignition temperature

| | |
|---|---|
| Solid: | No data available |
| Gas: | No data available |

Oxidizing properties

No data available

**Other safety characteristics**

| | |
|---|---|
| Evaporation rate: | No data available |
| Solvent separation test: | No data available |
| Solvent content: | No data available |
| Solid content: | No data available |
| Sublimation point: | No data available |
| Softening point: | No data available |
| Pour point: | No data available |
| | No data available |
| Viscosity / dynamic: | No data available |
| Flow time: | No data available |

**Further Information**

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reducing agent

Danger of polymerisation

In case of warming: Vapours can form explosive mixtures with air.

### 10.2. Chemical stability

Protect against: Light

Contains as stabilizer(s): Methanol

### 10.3. Possibility of hazardous reactions

Acids

Phenol

Nitric acid

Hydrogen peroxide

Alkali (lye)

permanganates, e.g. potassium permanganate

Oxidising agent

Hydrochloric acid

### 10.4. Conditions to avoid

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

Protect against:

Light

### 10.5. Incompatible materials

metals

Steel
Copper

**10.6. Hazardous decomposition products**

in case of fire, see:
SECTION 5: Firefighting measures

**Further information**

No data available

## SECTION 11: Toxicological information

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Toxicocinetics, metabolism and distribution**

Avoid exposure - obtain special instructions before use.

**Acute toxicity**

Fatal if inhaled.
Toxic in contact with skin.
Harmful if swallowed.
If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).
Pulmonary oedema
Mucous membrane irritation in the mouth, throat, esophagus and gastrointestinal tract.
Inhalation effect: Damage to the respiratory tract.

**ATEmix calculated**

ATE (oral) 588,2 mg/kg; ATE (dermal) 666,7 mg/kg; ATE (inhalation vapour) 1,360 mg/l

| CAS No | Chemical name | | | | |
|---|---|---|---|---|---|
| | Exposure route | Dose | Species | Source | Method |
| 50-00-0 | formaldehyde | | | | |
| | oral | ATE 500 mg/kg | | | |
| | dermal | ATE 300 mg/kg | | | |
| | inhalation (4 h) vapour | LC50 < 463 mg/l | Rat | Study report (2015) | OECD Guideline 403 |
| | inhalation gas | ATE 100 ppm | | | |
| 67-56-1 | methanol | | | | |
| | oral | LD50 6000 mg/kg | Monkey | Amer J Ophthalmol 40: 76-83 (cited in DG | Determination of the acute toxicity of t |
| | dermal | ATE 300 mg/kg | | | |
| | inhalation (4 h) vapour | LC50 128,2 mg/l | Rat | Study report (1980) | Study performed according to internal co |
| | inhalation dust/mist | ATE 0,5 mg/l | | | |

**Irritation and corrosivity**

Skin corrosion/irritation: Causes severe skin burns and eye damage.
Serious eye damage/eye irritation: Causes serious eye damage.
Corrosive to the respiratory tract.
Causes tears.

**Sensitising effects**

May cause an allergic skin reaction. (formaldehyde)

**Carcinogenic/mutagenic/toxic effects for reproduction**

May cause cancer. (formaldehyde)
Suspected of causing genetic defects. (formaldehyde)
Reproductive toxicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

Causes damage to organs. (methanol)
May cause respiratory irritation. (formaldehyde)
Liver and kidney damage
heart
eyes

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Information on likely routes of exposure**

No data available

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

No data available

**Practical experience**

No data available

**11.2. Information on other hazards**

**Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**Other information**

No data available

**Further information**

Irritant
corrosive
Allergic reactions
Dyspnoea
Cough
Inebriation
Dizziness
Headache
Dizziness
Agitation
Headache
Spasms
Impairment of vision
Anaesthetic state
Risk of serious damage to eyes.

## SECTION 12: Ecological information

**12.1. Toxicity**

Based on available data, the classification criteria are not met.

| CAS No | Chemical name | | | | | | |
|---|---|---|---|---|---|---|---|
| | Aquatic toxicity | Dose | | [h] \| [d] | Species | Source | Method |
| 50-00-0 | formaldehyde | | | | | | |
| | Acute fish toxicity | LC50 | 27,57 mg/l | 96 h | Ictalurus punctatus | Prog.Fish-Cult. 20(1):8-15 (1958) | acute toxicity test; "static bioassay" |
| | Acute algae toxicity | ErC50 | 3,48 mg/l | 72 h | Desmodesmus subspicatus | Ecotoxicol Environ Safety 54: 346-354 (2 | OECD Guideline 201 |
| | Acute crustacea toxicity | EC50 | 5,8 mg/l | 48 h | Daphnia pulex | Water, Air and Soil Pollution 97, 315-32 | OECD Guideline 202 |
| | Fish toxicity | NOEC | >= 48 mg/l | 28 d | Oryzias latipes | NTIS (ed.) Compendium of the FY1988 and | OECD Guideline 215 |
| | Crustacea toxicity | NOEC | >= 6,4 mg/l | 21 d | Daphnia magna | Study report (2008) | OECD Guideline 211 |
| | Acute bacteria toxicity | EC50 | 19 mg/l ( ) | 3 h | Activated sludge | Chemosphere 14, 1239-1251 (1985) | OECD Guideline 209 |
| 67-56-1 | methanol | | | | | | |
| | Acute fish toxicity | LC50 | 15400 mg/l | 96 h | Lepomis macrochirus | Bulletin of Environmental Contamination | other: EPA-660/3-75-009, 1975 |
| | Acute algae toxicity | ErC50 | ca. 22000 mg/l | 96 h | Pseudokirchneriella subcapitata | Ecotoxicology and Environmental Safety 7 | OECD Guideline 201 |
| | Acute crustacea toxicity | EC50 | > 10000 mg/l | 48 h | Daphnia magna | Water Research 23(4): 495-499 (1989) | other: DIN 38412 Teil 11 |
| | Fish toxicity | NOEC | 446,7 mg/l | 28 d | Pimephales promelas | SAR and QSAR in Environmental Research, | Calculation performed with ECOSAR |
| | Crustacea toxicity | NOEC | 208 mg/l | 21 d | Daphnia magna | OECD QSAR Toolbox Report (2013) | Toxicity of the target chemical is predi |

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**Partition coefficient n-octanol/water**

| CAS No | Chemical name | Log Pow |
|---|---|---|
| 50-00-0 | formaldehyde | 0,35 |
| 67-56-1 | methanol | -0,77 |

**BCF**

| CAS No | Chemical name | BCF | Species | Source |
|---|---|---|---|---|
| 50-00-0 | formaldehyde | < 1 | Paralichthys olivaceus and Sebastes schlegeli | Aquaculture 194, 253 |
| 67-56-1 | methanol | 1 | Cyprinus carpio | Comparative Biochemi |

**12.4. Mobility in soil**

No data available

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

Do not allow to enter into surface water or drains.

Forms corrosive mixtures with water even if diluted.

**Further information**

Avoid release to the environment.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

**Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

The waste code has to be identified in agreement with the disposal company or the competent authority.

## SECTION 14: Transport information

**Land transport (ADR/RID)**

| | |
|---|---|
| **14.1. UN number or ID number:** | UN 2209 |
| **14.2. UN proper shipping name:** | FORMALDEHYDE SOLUTION |
| **14.3. Transport hazard class(es):** | 8 |
| **14.4. Packing group:** | III |
| Hazard label: | 8 |
| Classification code: | C9 |
| Special Provisions: | 533 |
| Limited quantity: | 5 L |
| Excepted quantity: | E1 |
| Transport category: | 3 |
| Hazard No: | 80 |
| Tunnel restriction code: | E |

**Inland waterways transport (ADN)**

| | |
|---|---|
| **14.1. UN number or ID number:** | UN 2209 |
| **14.2. UN proper shipping name:** | FORMALDEHYDE SOLUTION |
| **14.3. Transport hazard class(es):** | 8 |
| **14.4. Packing group:** | III |
| Hazard label: | 8 |
| Classification code: | C9 |
| Special Provisions: | 533 |
| Limited quantity: | 5 L |
| Excepted quantity: | E1 |

**Marine transport (IMDG)**

| | |
|---|---|
| **14.1. UN number or ID number:** | UN 2209 |

| | |
|---|---|
| **14.2. UN proper shipping name:** | FORMALDEHYDE SOLUTION |
| **14.3. Transport hazard class(es):** | 8 |
| **14.4. Packing group:** | III |
| Hazard label: | 8 |
| Special Provisions: | - |
| Limited quantity: | 5 L |
| Excepted quantity: | E1 |
| EmS: | F-A, S-B |

**Air transport (ICAO-TI/IATA-DGR)**

| | |
|---|---|
| **14.1. UN number or ID number:** | UN 2209 |
| **14.2. UN proper shipping name:** | FORMALDEHYDE SOLUTION |
| **14.3. Transport hazard class(es):** | 8 |
| **14.4. Packing group:** | III |
| Hazard label: | 8 |
| Special Provisions: | A803 |
| Limited quantity Passenger: | 1 L |
| Passenger LQ: | Y841 |
| Excepted quantity: | E1 |
| IATA-packing instructions - Passenger: | 852 |
| IATA-max. quantity - Passenger: | 5 L |
| IATA-packing instructions - Cargo: | 856 |
| IATA-max. quantity - Cargo: | 60 L |

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

## SECTION 15: Regulatory information

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

**EU regulatory information**

Restrictions on use (REACH, annex XVII):
Entry 3, Entry 28, Entry 40, Entry 69, Entry 75

Information according to Directive 2012/18/EU (SEVESO III): H2 ACUTE TOXIC

**Additional information**

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 3 - highly hazardous to water

## SECTION 16: Other information

**Changes**

This data sheet contains changes from the previous version in section(s): 1,2,6,8,9,11,12,13,15.

**Abbreviations and acronyms**

Flam. Liq. 2: Flammable liquids, hazard category 2
Acute Tox. 2: Acute toxicity, hazard category 2
Acute Tox. 3: Acute toxicity, hazard category 3
Acute Tox. 4: Acute toxicity, hazard category 4
Skin Corr. 1B: Skin corrosion, sub-category 1B
Eye Dam. 1: Serious eye damage, hazard category 1
Skin Sens. 1: Skin sensitisation, hazard category 1
Skin Sens. 1A: Skin sensitisation, hazard category 1A
Muta. 2: Germ cell mutagenicity, hazard category 2
Carc. 1B: Carcinogenicity, hazard category 1B
STOT SE 1: Specific target organ toxicity - single exposure, hazard category 1
STOT SE 3: Specific target organ toxicity - single exposure, hazard category 3

**Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]**

| Classification | Classification procedure |
|---|---|
| Carc. 1B; H350 | Calculation method |
| Muta. 2; H341 | Calculation method |
| Acute Tox. 2; H330 | Calculation method |
| Acute Tox. 3; H311 | Calculation method |
| Acute Tox. 4; H302 | Calculation method |
| Skin Corr. 1B; H314 | Calculation method |
| Eye Dam. 1; H318 | Calculation method |
| Skin Sens. 1; H317 | Calculation method |
| STOT SE 1; H370 | Calculation method |
| STOT SE 3; H335 | Calculation method |

**Relevant H and EUH statements (number and full text)**

| | |
|---|---|
| H225 | Highly flammable liquid and vapour. |
| H301 | Toxic if swallowed. |
| H302 | Harmful if swallowed. |
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H330 | Fatal if inhaled. |
| H331 | Toxic if inhaled. |
| H335 | May cause respiratory irritation. |
| H341 | Suspected of causing genetic defects. |
| H350 | May cause cancer. |
| H370 | Causes damage to organs (eyes, central nervous system). |
| H370 | Causes damage to organs. |
| EUH071 | Corrosive to the respiratory tract. |

**Further Information**

Provide appropriate information, instructions and training to users
The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.
The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

*(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*