# PRIMER FOR PLASTIC/WOOD/STONE - 250 ML

| Version | Revision Date: | SDS Number: | Date of last issue: 01.02.2023 |
|---|---|---|---|
| 12.0 | 26.05.2023 | 10782832-00012 | Date of first issue: 11.06.2010 |

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

### 1.1 Product identifier

| | | |
|---|---|---|
| Trade name | : | PRIMER FOR PLASTIC/WOOD/STONE - 250 ML |
| Product code | : | 089010062 |
| Unique Formula Identifier (UFI) | : | 0QM8-90VV-7001-CWDE |

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

| | | |
|---|---|---|
| Use of the Substance/Mixture | : | Primers<br>Professional use product |
| Recommended restrictions on use | : | Not applicable |

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

| | | |
|---|---|---|
| Company | : | Adolf Wuerth GmbH & Co. KG<br>Reinhold-Würth-Str. 12-17<br>74653 Künzelsau |
| Telephone | : | +49 794015 0 |
| Telefax | : | +49 794015 10 00 |
| E-mail address of person responsible for the SDS | : | isi@wuerth.com |

### 1.4 Emergency telephone number

+49 (0)6132 – 84463

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008)**

| | |
|---|---|
| Flammable liquids, Category 2 | H225: Highly flammable liquid and vapour. |
| Skin sensitisation, Category 1 | H317: May cause an allergic skin reaction. |
| Eye irritation, Category 2 | H319: Causes serious eye irritation. |
| Specific target organ toxicity - single ex- | H336: May cause drowsiness or dizziness. |

posure, Category 3

| | |
|---|---|
| Long-term (chronic) aquatic hazard, Category 3 | H412: Harmful to aquatic life with long lasting effects. |

### 2.2 Label elements

**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :

Signal word : Danger

Hazard statements :
H225 Highly flammable liquid and vapour.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements :

**Prevention:**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

**Hazardous components which must be listed on the label:**

Ethyl acetate
Hexamethylene diisocyanate, oligomers
3-Mercaptopropyltrimethoxysilane
1,1,1-Trimethylolpropane, polymer with 2,6-toluene diisocyanate, 2-(2-hydroxypropoxy)propan-1-ol and diethylene glycol

Hexamethylene diisocyanate

**Additional Labelling**

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 2,5 %

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).
Vapours may form explosive mixture with air.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

**Components**

| Chemical name | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification | Concentration (% w/w) |
|---|---|---|---|
| Ethyl acetate | 141-78-6<br>205-500-4<br>607-022-00-5<br>01-2119475103-46 | Flam. Liq. 2; H225<br>Eye Irrit. 2; H319<br>STOT SE 3; H336<br>EUH066 | >= 30 - < 50 |
| Butanone | 78-93-3<br>201-159-0<br>606-002-00-3<br>01-2119457290-43 | Flam. Liq. 2; H225<br>Eye Irrit. 2; H319<br>STOT SE 3; H336<br>EUH066 | >= 10 - < 20 |
| n-Butyl acetate | 123-86-4<br>204-658-1<br>607-025-00-1<br>01-2119485493-29 | Flam. Liq. 3; H226<br>STOT SE 3; H336<br>EUH066 | >= 1 - < 10 |
| Hexamethylene diisocyanate, oligomers | 28182-81-2 | Acute Tox. 4; H332<br>Skin Sens. 1; H317<br>STOT SE 3; H335<br>---<br>Acute toxicity estimate<br><br>Acute inhalation tox- | >= 1 - < 10 |

| | | | |
|---|---|---|---|
| | | icity (dust/mist): 1,5 mg/l | |
| 1,1,1-Trimethylolpropane, polymer with 2,6-toluene diisocyanate, 2-(2-hydroxypropoxy)propan-1-ol and diethylene glycol | 68958-67-8 | Eye Irrit. 2; H319<br>Skin Sens. 1; H317 | >= 1 - < 10 |
| 3-Mercaptopropyltrimethoxysilane | 4420-74-0<br>224-588-5 | Acute Tox. 4; H302<br>Skin Sens. 1; H317<br>STOT SE 2; H371 (Central nervous system, optic nerve)<br>Aquatic Chronic 2; H411<br>---<br>Acute toxicity estimate<br><br>Acute oral toxicity: > 300 - 2.000 mg/kg | >= 2,5 - < 10 |
| 2-Methoxy-1-methylethyl acetate | 108-65-6<br>203-603-9<br>607-195-00-7<br>01-2119475791-29 | Flam. Liq. 3; H226<br>STOT SE 3; H336 | >= 1 - < 10 |
| Xylene | 1330-20-7<br>215-535-7<br>601-022-00-9<br>01-2119488216-32 | Flam. Liq. 3; H226<br>Acute Tox. 4; H332<br>Acute Tox. 4; H312<br>Skin Irrit. 2; H315<br>Eye Irrit. 2; H319<br>STOT SE 3; H335<br>STOT RE 2; H373 (Auditory system)<br>Asp. Tox. 1; H304<br>Aquatic Chronic 3; H412<br>---<br>Acute toxicity estimate<br><br>Acute inhalation toxicity (vapour): 11 mg/l<br>Acute dermal toxicity: 1.100 mg/kg | >= 1 - < 2,5 |
| 2-Methoxy-1-propanol Acetate | 70657-70-4<br>274-724-2<br>607-251-00-0 | Flam. Liq. 3; H226<br>Repr. 1B; H360D<br>STOT SE 3; H335 | >= 0,1 - < 0,3 |
| Hexamethylene diisocyanate | 822-06-0<br>212-485-8<br>615-011-00-1 | Acute Tox. 4; H302<br>Acute Tox. 1; H330<br>Skin Corr. 1C; H314<br>Eye Dam. 1; H318 | < 0,1 |

| | | | | |
|---|---|---|---|---|
| | | | Resp. Sens. 1; H334<br>Skin Sens. 1; H317<br>STOT SE 3; H335<br>---<br>specific concentration limit<br>Resp. Sens. 1; H334<br>>= 0,5 %<br>Skin Sens. 1; H317<br>>= 0,5 %<br>---<br>Acute toxicity estimate<br><br>Acute oral toxicity: 959 mg/kg<br>Acute inhalation toxicity (vapour): 0,124 mg/l | |

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

If inhaled : If inhaled, remove to fresh air.
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention.

If swallowed : If swallowed, DO NOT induce vomiting.
If vomiting occurs have person lean forward.

Call a physician or poison control centre immediately.
Rinse mouth thoroughly with water.
Never give anything by mouth to an unconscious person.

### 4.2 Most important symptoms and effects, both acute and delayed

Risks : May cause an allergic skin reaction.
Causes serious eye irritation.
May cause drowsiness or dizziness.
Repeated exposure may cause skin dryness or cracking.

Respiratory symptoms, including pulmonary edema, may be delayed.
Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical
Water spray in large fire situations

Unsuitable extinguishing media : High volume water jet

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Do not use a solid water stream as it may scatter and spread fire.
Flash back possible over considerable distance.
Vapours may form explosive mixtures with air.
Exposure to combustion products may be a hazard to health.
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

Hazardous combustion products : Carbon oxides
Nitrogen oxides (NOx)
Sulphur oxides
Silicon oxides

### 5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

| | | |
|---|---|---|
| Specific extinguishing methods | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Use water spray to cool unopened containers.<br>Remove undamaged containers from fire area if it is safe to do so.<br>Evacuate area. |

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

| | | |
|---|---|---|
| Personal precautions | : | Remove all sources of ignition.<br>Ventilate the area.<br>Use personal protective equipment.<br>Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8). |

### 6.2 Environmental precautions

| | | |
|---|---|---|
| Environmental precautions | : | Avoid release to the environment.<br>Prevent further leakage or spillage if safe to do so.<br>Prevent spreading over a wide area (e.g. by containment or oil barriers).<br>Retain and dispose of contaminated wash water.<br>Local authorities should be advised if significant spillages cannot be contained. |

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

| | | |
|---|---|---|
| Methods for cleaning up | : | Non-sparking tools should be used.<br>Soak up with inert absorbent material.<br>Suppress (knock down) gases/vapours/mists with a water spray jet.<br>For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.<br>Clean up remaining materials from spill with suitable absorbent.<br>After approximately one hour, transfer to waste container and do not seal, due to evolution of carbon dioxide.<br>Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.<br>Sections 13 and 15 of this SDS provide information regarding certain local or national requirements. |

### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

| | | |
|---|---|---|
| Technical measures | : | See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section. |
| Local/Total ventilation | : | If sufficient ventilation is unavailable, use with local exhaust ventilation.<br>Use explosion-proof electrical, ventilating and lighting equipment. |
| Advice on safe handling | : | Do not get on skin or clothing.<br>Do not breathe mist or vapours.<br>Do not swallow.<br>Do not get in eyes.<br>Wash skin thoroughly after handling.<br>Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment<br>Non-sparking tools should be used.<br>Keep container tightly closed.<br>Keep away from water.<br>Protect from moisture.<br>Already sensitised individuals, and those susceptible to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respiratory irritants or sensitisers.<br>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>Take precautionary measures against static discharges.<br>Do not eat, drink or smoke when using this product.<br>Take care to prevent spills, waste and minimize release to the environment. |
| Hygiene measures | : | If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace.<br>Wash contaminated clothing before re-use. |

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

| | | |
|---|---|---|
| Requirements for storage areas and containers | : | Keep in properly labelled containers. Store locked up. Protect from moisture. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition. |
| Advice on common storage | : | Do not store with the following product types:<br>Strong oxidizing agents<br>Self-reactive substances and mixtures<br>Organic peroxides |

Flammable solids
Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Substances and mixtures, which in contact with water, emit flammable gases
Explosives
Gases
Very acutely toxic substances and mixtures

Storage class (TRGS 510) : 3

### 7.3 Specific end use(s)

Specific use(s) : No data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Occupational Exposure Limits**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---|---|---|---|---|
| Ethyl acetate | 141-78-6 | TWA | 200 ppm<br>734 mg/m3 | 2017/164/EU |
| | Further information: Indicative | | | |
| | | STEL | 400 ppm<br>1.468 mg/m3 | 2017/164/EU |
| | Further information: Indicative | | | |
| | | AGW | 200 ppm<br>730 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 2;(I) | | | |
| | Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child | | | |
| Butanone | 78-93-3 | STEL | 300 ppm<br>900 mg/m3 | 2000/39/EC |
| | Further information: Indicative | | | |
| | | TWA | 200 ppm<br>600 mg/m3 | 2000/39/EC |
| | Further information: Indicative | | | |
| | | AGW | 200 ppm<br>600 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 1;(I) | | | |
| | Further information: Skin absorption, When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child | | | |
| n-Butyl acetate | 123-86-4 | STEL | 150 ppm<br>723 mg/m3 | 2019/1831/EU |
| | Further information: Indicative | | | |
| | | TWA | 50 ppm | 2019/1831/E |

| | | | | |
|---|---|---|---|---|
| | | | 241 mg/m3 | U |
| | Further information: Indicative | | | |
| | | AGW | 62 ppm<br>300 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 2;(I) | | | |
| | Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child | | | |
| 2-Methoxy-1-methylethyl acetate | 108-65-6 | STEL | 100 ppm<br>550 mg/m3 | 2000/39/EC |
| | Further information: Identifies the possibility of significant uptake through the skin, Indicative | | | |
| | | TWA | 50 ppm<br>275 mg/m3 | 2000/39/EC |
| | Further information: Identifies the possibility of significant uptake through the skin, Indicative | | | |
| | | AGW | 50 ppm<br>270 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 1;(I) | | | |
| | Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child | | | |
| Xylene | 1330-20-7 | TWA | 50 ppm<br>221 mg/m3 | 2000/39/EC |
| | Further information: Identifies the possibility of significant uptake through the skin, Indicative | | | |
| | | STEL | 100 ppm<br>442 mg/m3 | 2000/39/EC |
| | Further information: Identifies the possibility of significant uptake through the skin, Indicative | | | |
| | | AGW | 50 ppm<br>220 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 2;(II) | | | |
| | Further information: Skin absorption | | | |
| 2-Methoxy-1-propanol Acetate | 70657-70-4 | AGW | 5 ppm<br>28 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 2;(I) | | | |
| | Further information: Skin absorption, When there is compliance with the OEL and biological tolerance values, harm to the unborn child can not be excluded | | | |
| Hexamethylene diisocyanate | 822-06-0 | AGW | 0,005 ppm<br>0,035 mg/m3 | TRGS 430 |
| | Peak-limit: excursion factor (category): 1;=2=(I) | | | |
| | Further information: In well-founded cases also a momentary value can be established, that never can be exceeded. This substance will be indicated by = = in combination with an exceeding value., airway sensitizing substance | | | |
| | | AGW (Vapour and aerosols) | 0,005 ppm<br>0,035 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 1;=2=(I) | | | |
| | Further information: In well-found cases also a momentary value can be established, that never can be exceeded. This substance will be indicated by = = in combination with an exceeding value., Substance sensitizing through the | | | |

| | |
|---|---|
| | respiratory system |

**Occupational exposure limits of decomposition products**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---|---|---|---|---|
| Methanol | 67-56-1 | TWA | 200 ppm<br>260 mg/m3 | 2006/15/EC |
| | Further information: Indicative, Identifies the possibility of significant uptake through the skin | | | |
| | | AGW | 100 ppm<br>130 mg/m3 | DE TRGS 900 |
| | Peak-limit: excursion factor (category): 2;(II) | | | |
| | Further information: Skin absorption, When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child | | | |

**Biological occupational exposure limits**

| Substance name | CAS-No. | Control parameters | Sampling time | Basis |
|---|---|---|---|---|
| Butanone | 78-93-3 | 2-butanone: 2 mg/l (Urine) | Immediately after exposure or after working hours | TRGS 903 |
| Xylene | 1330-20-7 | methylhippuric acid (all isomers): 2.000 mg/l (Urine) | Immediately after exposure or after working hours | TRGS 903 |
| Hexamethylene diisocyanate | 822-06-0 | hexamethylendiamine: 15 µg/g creatinine (Urine) | Immediately after exposure or after working hours | TRGS 903 |

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|---|---|---|---|---|
| Ethyl acetate | Workers | Inhalation | Long-term systemic effects | 734 mg/m3 |
| | Workers | Inhalation | Acute systemic effects | 1468 mg/m3 |
| | Workers | Inhalation | Long-term local effects | 734 mg/m3 |
| | Workers | Inhalation | Acute local effects | 1468 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 63 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 367 mg/m3 |
| | Consumers | Inhalation | Acute systemic effects | 734 mg/m3 |
| | Consumers | Inhalation | Long-term local effects | 367 mg/m3 |
| | Consumers | Inhalation | Acute local effects | 734 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 37 mg/kg bw/day |

| | | | | |
|---|---|---|---|---|
| | Consumers | Ingestion | Long-term systemic effects | 4,5 mg/kg bw/day |
| Butanone | Workers | Inhalation | Long-term systemic effects | 600 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 1161 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 106 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 412 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 31 mg/kg bw/day |
| n-Butyl acetate | Workers | Inhalation | Acute systemic effects | 600 mg/m3 |
| | Workers | Inhalation | Acute local effects | 600 mg/m3 |
| | Workers | Inhalation | Long-term systemic effects | 300 mg/m3 |
| | Workers | Inhalation | Long-term local effects | 300 mg/m3 |
| | Consumers | Inhalation | Acute systemic effects | 300 mg/m3 |
| | Consumers | Inhalation | Acute local effects | 300 mg/m3 |
| | Consumers | Inhalation | Long-term systemic effects | 35,7 mg/m3 |
| | Consumers | Inhalation | Long-term local effects | 35,7 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 11 mg/kg bw/day |
| | Consumers | Skin contact | Acute systemic effects | 11 mg/kg bw/day |
| | Consumers | Skin contact | Long-term systemic effects | 6 mg/kg bw/day |
| | Consumers | Skin contact | Acute systemic effects | 6 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 2 mg/kg bw/day |
| | Consumers | Ingestion | Acute systemic effects | 2 mg/kg bw/day |
| Xylene | Workers | Inhalation | Long-term systemic effects | 221 mg/m3 |
| | Workers | Inhalation | Acute systemic effects | 442 mg/m3 |
| | Workers | Inhalation | Long-term local effects | 221 mg/m3 |
| | Workers | Inhalation | Acute local effects | 442 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 212 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 65,3 mg/m3 |
| | Consumers | Inhalation | Acute systemic effects | 260 mg/m3 |

| | | | | |
|---|---|---|---|---|
| | Consumers | Inhalation | Long-term local effects | 65,3 mg/m3 |
| | Consumers | Inhalation | Acute local effects | 260 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 125 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 12,5 mg/kg bw/day |
| 2-Methoxy-1-methylethyl acetate | Workers | Inhalation | Long-term systemic effects | 275 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 796 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 33 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 320 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 36 mg/kg bw/day |
| | Workers | Inhalation | Acute local effects | 550 mg/m3 |
| | Consumers | Inhalation | Long-term local effects | 33 mg/m3 |
| Hexamethylene diisocyanate | Workers | Inhalation | Long-term systemic effects | 0,035 mg/m3 |
| | Workers | Inhalation | Acute systemic effects | 0,07 mg/m3 |
| | Workers | Inhalation | Long-term local effects | 0,035 mg/m3 |
| | Workers | Inhalation | Acute local effects | 0,07 mg/m3 |
| Hexamethylene diisocyanate, oligomers | Workers | Inhalation | Long-term local effects | 0,5 mg/m3 |
| | Workers | Inhalation | Acute local effects | 1 mg/m3 |

**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

| Substance name | Environmental Compartment | Value |
|---|---|---|
| Ethyl acetate | Fresh water | 0,24 mg/l |
| | Marine water | 0,024 mg/l |
| | Intermittent use/release | 1,65 mg/l |
| | Sewage treatment plant | 650 mg/l |
| | Fresh water sediment | 1,15 mg/kg dry weight (d.w.) |
| | Marine sediment | 0,115 mg/kg dry weight (d.w.) |
| | Soil | 0,148 mg/kg dry weight (d.w.) |
| | Oral (Secondary Poisoning) | 200 mg/kg food |
| Butanone | Fresh water | 55,8 mg/l |
| | Freshwater - intermittent | 55,8 mg/l |
| | Marine water | 55,8 mg/l |
| | Sewage treatment plant | 709 mg/l |
| | Fresh water sediment | 284,74 mg/kg dry weight (d.w.) |
| | Marine sediment | 284,7 mg/kg dry |

| | | |
|---|---|---|
| | | weight (d.w.) |
| | Soil | 22,5 mg/kg dry weight (d.w.) |
| | Oral (Secondary Poisoning) | 1000 mg/kg food |
| n-Butyl acetate | Fresh water | 0,18 mg/l |
| | Marine water | 0,018 mg/l |
| | Sewage treatment plant | 35,6 mg/l |
| | Fresh water sediment | 0,981 mg/kg dry weight (d.w.) |
| | Marine sediment | 0,098 mg/kg dry weight (d.w.) |
| | Soil | 0,09 mg/kg dry weight (d.w.) |
| Xylene | Fresh water | 0,327 mg/l |
| | Intermittent use/release | 0,327 mg/l |
| | Marine water | 0,327 mg/l |
| | Sewage treatment plant | 6,58 mg/l |
| | Fresh water sediment | 12,46 mg/kg dry weight (d.w.) |
| | Marine sediment | 12,46 mg/kg dry weight (d.w.) |
| | Soil | 2,31 mg/kg dry weight (d.w.) |
| 2-Methoxy-1-methylethyl acetate | Fresh water | 0,635 mg/l |
| | Marine water | 0,0635 mg/l |
| | Intermittent use/release | 6,35 mg/l |
| | Sewage treatment plant | 100 mg/l |
| | Fresh water sediment | 3,29 mg/kg dry weight (d.w.) |
| | Marine sediment | 0,329 mg/kg dry weight (d.w.) |
| | Soil | 0,29 mg/kg dry weight (d.w.) |
| Hexamethylene diisocyanate | Fresh water | 0,0774 mg/l |
| | Marine water | 0,00774 mg/l |
| | Intermittent use/release | 0,774 mg/l |
| | Sewage treatment plant | 8,42 mg/l |
| | Fresh water sediment | 0,01334 mg/kg |
| | Marine sediment | 0,001344 mg/kg |
| | Soil | 0,0026 mg/kg |
| Hexamethylene diisocyanate, oligomers | Fresh water | 0,127 mg/l |
| | Marine water | 0,0127 mg/l |
| | Intermittent use/release | 1,27 mg/l |
| | Sewage treatment plant | 38,3 mg/l |
| | Fresh water sediment | 266700 mg/kg |
| | Marine sediment | 26670 mg/kg |
| | Soil | 53182 mg/kg |

### 8.2 Exposure controls

**Engineering measures**

Processing may form hazardous compounds (see section 10).
Minimize workplace exposure concentrations.
If sufficient ventilation is unavailable, use with local exhaust ventilation.
Use explosion-proof electrical, ventilating and lighting equipment.

**Personal protective equipment**

| | | |
|---|---|---|
| Eye/face protection | : | Wear the following personal protective equipment:<br>Safety goggles<br>Equipment should conform to DIN EN 166 |
| Hand protection | | |
| Material | : | Fluorinated rubber |
| Break through time | : | > 30 min |
| Glove thickness | : | 0,4 mm |
| Directive | : | Equipment should conform to DIN EN 374 |
| Remarks | : | Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. |
| Skin and body protection | : | Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.<br>Wear the following personal protective equipment:<br>If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.<br>Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc). |
| Respiratory protection | : | If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.<br>Equipment should conform to DIN EN 137 |
| Filter type | : | Self-contained breathing apparatus |

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | | |
|---|---|---|
| Physical state | : | liquid |
| Colour | : | colourless |

| | | |
|---|---|---|
| Odour | : | ester-like |
| Odour Threshold | : | No data available |
| Melting point/freezing point | : | No data available |
| Initial boiling point and boiling range | : | 77 °C |
| Flammability (solid, gas) | : | Not applicable |
| Flammability (liquids) | : | No data available |
| Upper explosion limit / Upper flammability limit | : | 12 %(V) |
| Lower explosion limit / Lower flammability limit | : | 2 %(V) |
| Flash point | : | -8 °C |
| Auto-ignition temperature | : | 333 °C |
| Decomposition temperature | : | No data available |
| pH | : | ca. 7<br>Concentration: 50 % |
| Viscosity | | |
| Viscosity, kinematic | : | > 7 mm2/s (40 °C) |
| Solubility(ies) | | |
| Water solubility | : | insoluble |
| Partition coefficient: n-octanol/water | : | Not applicable |
| Vapour pressure | : | ca. 60 hPa |
| Density | : | ca. 1 g/cm³ (20 °C) |
| Relative vapour density | : | No data available |
| Particle characteristics | | |
| Particle size | : | Not applicable |

**9.2 Other information**

| | | |
|---|---|---|
| Explosives | : | Not explosive |

| | | |
|---|---|---|
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |
| Evaporation rate | : | No data available |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Not classified as a reactivity hazard.

### 10.2 Chemical stability

Stable if used as directed. Follow precautionary advice and avoid incompatible materials and conditions.
Polymerises at high temperatures with evolution of carbon dioxide.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Highly flammable liquid and vapour.
Vapours may form explosive mixture with air.
Isocyanates react with many materials and the rate of reaction increases with temperature as well as increased contact; these reactions can become violent. Contact is increased by stirring or if the other material mixes with the isocyanate.
Exothermic reaction with acids, amines and alcohols
Reacts with water to form carbon dioxide and heat
Isocyanates are not soluble in water and sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea.
Hazardous decomposition products will be formed upon contact with water or humid air.

### 10.4 Conditions to avoid

Conditions to avoid : Exposure to moisture
Heat, flames and sparks.

### 10.5 Incompatible materials

Materials to avoid : Oxidizing agents
Acids
Bases
Water
Alcohols
Amines
Ammonia
Aluminium
Zinc
Brass
Tin
Copper
Galvanised metals
Humid air

### 10.6 Hazardous decomposition products

Contact with water or humid air : Methanol

## SECTION 11: Toxicological information

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

Information on likely routes of exposure : Inhalation
Skin contact
Ingestion
Eye contact

**Acute toxicity**

Not classified based on available information.

**Product:**

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

**Components:**

**Ethyl acetate:**

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 22,5 mg/l
Exposure time: 6 h
Test atmosphere: vapour
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 20.000 mg/kg

**Butanone:**

Acute oral toxicity : LD50 (Rat): > 2.000 - 5.000 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 25,5 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 436

Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg

**n-Butyl acetate:**

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 21,1 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg

**Hexamethylene diisocyanate, oligomers:**

Acute oral toxicity : LD50 (Rat, female): > 2.500 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : Acute toxicity estimate: 1,5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgement

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

1,1,1-Trimethylolpropane, polymer with 2,6-toluene diisocyanate, 2-(2-hydroxypropoxy)propan-1-ol and diethylene glycol

**:**

Acute oral toxicity : LD50 (Rat): 4.130 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

**3-Mercaptopropyltrimethoxysilane:**

Acute oral toxicity : Acute toxicity estimate (Humans): > 300 - 2.000 mg/kg
Method: Expert judgement
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit, female): 2.172 mg/kg

**2-Methoxy-1-methylethyl acetate:**

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

| | | |
|---|---|---|
| Acute inhalation toxicity | : | LC0 (Rat): 9,48 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapour |
| Acute dermal toxicity | : | LD50 (Rat): > 5.000 mg/kg |

**Xylene:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): 3.523 mg/kg<br>Method: Directive 67/548/EEC, Annex V, B.1. |
| Acute inhalation toxicity | : | Acute toxicity estimate: 11 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapour<br>Method: Expert judgement<br>Remarks: Based on national or regional regulation. |
| Acute dermal toxicity | : | Acute toxicity estimate: 1.100 mg/kg<br>Method: Expert judgement<br>Remarks: Based on national or regional regulation. |

**2-Methoxy-1-propanol Acetate:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): > 5.000 mg/kg |
| Acute inhalation toxicity | : | LC50 (Rat): > 10,8 mg/l<br>Exposure time: 3 h<br>Test atmosphere: dust/mist<br>Remarks: Based on data from similar materials |
| Acute dermal toxicity | : | LD50 (Rabbit): > 2.000 mg/kg |

**Hexamethylene diisocyanate:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): 959 mg/kg |
| Acute inhalation toxicity | : | LC50 (Rat): 124 mg/m3<br>Exposure time: 4 h<br>Test atmosphere: vapour<br>Method: OECD Test Guideline 403 |
| Acute dermal toxicity | : | LD50 (Rat): > 7.000 mg/kg<br>Method: OECD Test Guideline 402 |

**Skin corrosion/irritation**

Repeated exposure may cause skin dryness or cracking.

**Components:**

**Ethyl acetate:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No skin irritation |

Assessment : Repeated exposure may cause skin dryness or cracking.

**Butanone:**

Assessment : Repeated exposure may cause skin dryness or cracking.

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
Remarks : Based on data from similar materials

**n-Butyl acetate:**

Species : Rabbit
Result : No skin irritation

Assessment : Repeated exposure may cause skin dryness or cracking.

**Hexamethylene diisocyanate, oligomers:**

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

**2-Methoxy-1-methylethyl acetate:**

Species : Rabbit
Result : No skin irritation

**Xylene:**

Species : Rabbit
Result : Skin irritation

**2-Methoxy-1-propanol Acetate:**

Species : Rabbit
Result : No skin irritation
Remarks : Based on data from similar materials

**Hexamethylene diisocyanate:**

Species : Rabbit
Method : OECD Test Guideline 404
Result : Corrosive after 1 to 4 hours of exposure

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Components:**

**Ethyl acetate:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 405 |
| Result | : | No eye irritation |

**Butanone:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 405 |
| Result | : | Irritation to eyes, reversing within 21 days |

**n-Butyl acetate:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 405 |
| Result | : | No eye irritation |

**Hexamethylene diisocyanate, oligomers:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 405 |
| Result | : | No eye irritation |

1,1,1-Trimethylolpropane, polymer with 2,6-toluene diisocyanate, 2-(2-hydroxypropoxy)propan-1-ol and diethylene glycol

**:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | Irritation to eyes, reversing within 21 days |
| Remarks | : | Based on data from similar materials |

**3-Mercaptopropyltrimethoxysilane:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No eye irritation |

**2-Methoxy-1-methylethyl acetate:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No eye irritation |

**Xylene:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | Irritation to eyes, reversing within 21 days |

**2-Methoxy-1-propanol Acetate:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | No eye irritation |
| Remarks | : | Based on data from similar materials |

**Hexamethylene diisocyanate:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 405 |
| Result | : | Irreversible effects on the eye |

**Respiratory or skin sensitisation**

**Skin sensitisation**

May cause an allergic skin reaction.

**Respiratory sensitisation**

Not classified based on available information.

**Components:**

**Ethyl acetate:**

| | | |
|---|---|---|
| Test Type | : | Maximisation Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |

**Butanone:**

| | | |
|---|---|---|
| Test Type | : | Buehler Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |

**n-Butyl acetate:**

| | | |
|---|---|---|
| Test Type | : | Maximisation Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Result | : | negative |

**Hexamethylene diisocyanate, oligomers:**

| | | |
|---|---|---|
| Test Type | : | Local lymph node assay (LLNA) |
| Exposure routes | : | Skin contact |
| Species | : | Mouse |
| Method | : | OECD Test Guideline 429 |
| Result | : | positive |
| | | |
| Assessment | : | Probability or evidence of skin sensitisation in humans |
| | | |
| Exposure routes | : | Inhalation |
| Species | : | Guinea pig |
| Result | : | negative |

1,1,1-Trimethylolpropane, polymer with 2,6-toluene diisocyanate, 2-(2-hydroxypropoxy)propan-1-ol and diethylene glycol

**:**

| | | |
|---|---|---|
| Test Type | : | Local lymph node assay (LLNA) |
| Exposure routes | : | Skin contact |
| Species | : | Mouse |
| Method | : | OECD Test Guideline 429 |
| Result | : | positive |
| Remarks | : | Based on data from similar materials |
| Assessment | : | Probability or evidence of skin sensitisation in humans |

**3-Mercaptopropyltrimethoxysilane:**

| | | |
|---|---|---|
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Result | : | positive |
| Assessment | : | Probability or evidence of skin sensitisation in humans |

**2-Methoxy-1-methylethyl acetate:**

| | | |
|---|---|---|
| Test Type | : | Maximisation Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |

**Xylene:**

| | | |
|---|---|---|
| Test Type | : | Local lymph node assay (LLNA) |
| Exposure routes | : | Skin contact |
| Species | : | Mouse |
| Result | : | negative |

**2-Methoxy-1-propanol Acetate:**

| | | |
|---|---|---|
| Test Type | : | Maximisation Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Result | : | negative |
| Remarks | : | Based on data from similar materials |

**Hexamethylene diisocyanate:**

| | | |
|---|---|---|
| Test Type | : | Maximisation Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Result | : | positive |
| Assessment | : | Probability or evidence of skin sensitisation in humans |

Exposure routes : inhalation (vapour)
Species : Guinea pig
Result : positive

Assessment : Probability of respiratory sensitisation in humans based on animal testing

**Germ cell mutagenicity**

Not classified based on available information.

**Components:**

**Ethyl acetate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: Chromosome aberration test in vitro
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Hamster
Application Route: Ingestion
Result: negative

**Butanone:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Result: negative

Test Type: Chromosome aberration test in vitro
Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative

Test Type: Saccharomyces cerevisiae, gene mutation assay (in vitro)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection

Result: negative

**n-Butyl acetate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

**Hexamethylene diisocyanate, oligomers:**

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Result: negative

**3-Mercaptopropyltrimethoxysilane:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 490
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

**2-Methoxy-1-methylethyl acetate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Result: negative
Remarks: Based on data from similar materials

**Xylene:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: Chromosome aberration test in vitro
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Result: negative

Test Type: In vitro sister chromatid exchange assay in mammalian cells
Result: negative

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)
Species: Mouse
Application Route: Skin contact
Result: negative

**2-Methoxy-1-propanol Acetate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on data from similar materials

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative
Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro
Result: negative
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test
Result: negative
Remarks: Based on data from similar materials

**Hexamethylene diisocyanate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: inhalation (vapour)
Result: negative

**Carcinogenicity**

Not classified based on available information.

**Components:**

**2-Methoxy-1-methylethyl acetate:**

| | | |
|---|---|---|
| Species | : | Rat |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 2 Years |
| Result | : | negative |
| Remarks | : | Based on data from similar materials |

**Xylene:**

| | | |
|---|---|---|
| Species | : | Rat |
| Application Route | : | Ingestion |
| Exposure time | : | 103 weeks |
| Result | : | negative |

**Hexamethylene diisocyanate:**

| | | |
|---|---|---|
| Species | : | Rat |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 2 Years |
| Method | : | OECD Test Guideline 453 |
| Result | : | negative |

**Reproductive toxicity**

Not classified based on available information.

**Components:**

**Ethyl acetate:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Two-generation reproduction toxicity study<br>Species: Mouse<br>Application Route: Ingestion<br>Result: negative<br>Remarks: Based on data from similar materials<br><br>Species: Rat<br>Application Route: inhalation (vapour)<br>Result: negative |
| Effects on foetal development | : | Test Type: Embryo-foetal development<br>Species: Rat<br>Application Route: Inhalation<br>Result: negative<br>Remarks: Based on data from similar materials<br><br>Test Type: Embryo-foetal development<br>Species: Mouse<br>Application Route: Ingestion |

Result: negative
Remarks: Based on data from similar materials

**Butanone:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Inhalation
Method: OECD Test Guideline 414
Result: negative

**n-Butyl acetate:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapour)
Method: OECD Test Guideline 416
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: inhalation (vapour)
Result: negative

**2-Methoxy-1-methylethyl acetate:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapour)
Method: OECD Test Guideline 416
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: inhalation (vapour)
Result: negative

**Xylene:**

Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapour)
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat

Application Route: inhalation (vapour)
Result: negative

**2-Methoxy-1-propanol Acetate:**

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Inhalation
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rabbit
Application Route: Inhalation
Result: positive

Reproductive toxicity - Assessment : Clear evidence of adverse effects on development, based on animal experiments.

**Hexamethylene diisocyanate:**

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (vapour)
Method: OECD Test Guideline 422
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: inhalation (vapour)
Method: OECD Test Guideline 414
Result: negative

**STOT - single exposure**

May cause drowsiness or dizziness.

**Components:**

**Ethyl acetate:**

Assessment : May cause drowsiness or dizziness.

**Butanone:**

Assessment : May cause drowsiness or dizziness.

**n-Butyl acetate:**

Assessment : May cause drowsiness or dizziness.

**Hexamethylene diisocyanate, oligomers:**

Assessment : May cause respiratory irritation.

**3-Mercaptopropyltrimethoxysilane:**

| | | |
|---|---|---|
| Exposure routes | : | Ingestion |
| Target Organs | : | Central nervous system, optic nerve |
| Assessment | : | May cause damage to organs. |
| Remarks | : | Based on data from similar materials |

**2-Methoxy-1-methylethyl acetate:**

| | | |
|---|---|---|
| Assessment | : | May cause drowsiness or dizziness. |

**Xylene:**

| | | |
|---|---|---|
| Assessment | : | May cause respiratory irritation. |

**2-Methoxy-1-propanol Acetate:**

| | | |
|---|---|---|
| Assessment | : | May cause respiratory irritation. |

**Hexamethylene diisocyanate:**

| | | |
|---|---|---|
| Assessment | : | May cause respiratory irritation. |

**STOT - repeated exposure**

Not classified based on available information.

**Components:**

**Xylene:**

| | | |
|---|---|---|
| Exposure routes | : | inhalation (vapour) |
| Target Organs | : | Auditory system |
| Assessment | : | Shown to produce significant health effects in animals at concentrations of >0.2 to 1 mg/l/6h/d. |

**Hexamethylene diisocyanate:**

| | | |
|---|---|---|
| Exposure routes | : | inhalation (vapour) |
| Assessment | : | No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less. |

**Repeated dose toxicity**

**Components:**

**Ethyl acetate:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 900 mg/kg |
| LOAEL | : | 3.600 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 90 Days |

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 1,28 mg/l |
| LOAEL | : | 2,75 mg/kg |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 94 Days |

**Butanone:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 14,84 mg/l |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 90 Days |
| Method | : | OECD Test Guideline 413 |

**n-Butyl acetate:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 2,4 mg/l |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 90 Days |

**2-Methoxy-1-methylethyl acetate:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | > 1.000 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 41 - 45 Days |
| Method | : | OECD Test Guideline 422 |

| | | |
|---|---|---|
| Species | : | Mouse |
| NOAEL | : | 1,62 mg/l |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 2 yr |
| Remarks | : | Based on data from similar materials |

| | | |
|---|---|---|
| Species | : | Rabbit |
| NOAEL | : | > 1.838 mg/kg |
| Application Route | : | Skin contact |
| Exposure time | : | 90 Days |
| Remarks | : | Based on data from similar materials |

**Xylene:**

| | | |
|---|---|---|
| Species | : | Rat |
| LOAEL | : | > 0,2 - 1 mg/l |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 13 Weeks |
| Remarks | : | Based on data from similar materials |

| | | |
|---|---|---|
| Species | : | Rat |
| LOAEL | : | 150 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 90 Days |

**2-Methoxy-1-propanol Acetate:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | > 2.600 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 14 Days |

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | > 0,6 mg/l |
| Application Route | : | Inhalation |
| Exposure time | : | 28 Days |

**Hexamethylene diisocyanate:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 0,000034 mg/l |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 2 yr |

**Aspiration toxicity**

Not classified based on available information.

**Components:**

**Butanone:**

The substance or mixture causes concern owing to the assumption that it causes a human aspiration toxicity hazard.

**Xylene:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

### 11.2 Information on other hazards

**Endocrine disrupting properties**

**Product:**

| | | |
|---|---|---|
| Assessment | : | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |

**Experience with human exposure**

**Components:**

**Ethyl acetate:**

| | | |
|---|---|---|
| Eye contact | : | Target Organs: Eye |

Symptoms: Irritation

## SECTION 12: Ecological information

### 12.1 Toxicity

**Components:**

**Ethyl acetate:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Pimephales promelas (fathead minnow)): 220 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 3.090 mg/l<br>Exposure time: 24 h<br>Method: DIN 38412 |
| Toxicity to algae/aquatic plants | : | NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |
| Toxicity to microorganisms | : | EC10 (Photobacterium phosphoreum): 1.650 mg/l<br>Exposure time: 0,25 h |
| Toxicity to fish (Chronic toxicity) | : | NOEC: > 1 - 9,65 mg/l<br>Exposure time: 32 d<br>Species: Pimephales promelas (fathead minnow) |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 2,4 mg/l<br>Exposure time: 24 d<br>Species: Daphnia magna (Water flea) |

**Butanone:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Pimephales promelas (fathead minnow)): 2.993 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 308 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202 |
| Toxicity to algae/aquatic plants | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): 2.029 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 201<br><br>NOEC (Pseudokirchneriella subcapitata (green algae)): 1.240 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 201 |

**n-Butyl acetate:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Pimephales promelas (fathead minnow)): 18 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia sp. (water flea)): 44 mg/l<br>Exposure time: 48 h |
| Toxicity to algae/aquatic plants | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): 397 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials<br><br>NOEC (Pseudokirchneriella subcapitata (green algae)): 196 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials |
| Toxicity to microorganisms | : | IC50 (Tetrahymena pyriformis): 356 mg/l<br>Exposure time: 40 h |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 23,2 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>Method: OECD Test Guideline 211<br>Remarks: Based on data from similar materials |

**Hexamethylene diisocyanate, oligomers:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Danio rerio (zebra fish)): > 100 mg/l<br>Exposure time: 96 h<br>Method: Directive 67/548/EEC, Annex V, C.1. |
| Toxicity to daphnia and other aquatic invertebrates | : | EL50 (Daphnia magna (Water flea)): 127 mg/l<br>Exposure time: 48 h<br>Method: Directive 67/548/EEC, Annex V, C.2. |
| Toxicity to algae/aquatic plants | : | EC10 (Desmodesmus subspicatus (green algae)): 370 mg/l<br>Exposure time: 72 h<br><br>ErC50 (Desmodesmus subspicatus (green algae)): > 1.000 mg/l<br>Exposure time: 72 h |
| Toxicity to microorganisms | : | EC10 : 880 mg/l<br>Exposure time: 3 h<br>Method: OECD Test Guideline 209 |

1,1,1-Trimethylolpropane, polymer with 2,6-toluene diisocyanate, 2-(2-hydroxypropoxy)propan-1-ol and diethylene glycol

**:**

**Ecotoxicology Assessment**

| | | |
|---|---|---|
| Acute aquatic toxicity | : | Toxic effects cannot be excluded |
| Chronic aquatic toxicity | : | Toxic effects cannot be excluded |

**3-Mercaptopropyltrimethoxysilane:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Danio rerio (zebra fish)): 439 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 6,7 mg/l<br>Exposure time: 48 h |
| Toxicity to algae/aquatic plants | : | EC50 (Desmodesmus subspicatus (green algae)): 267 mg/l<br>Exposure time: 72 h |

**2-Methoxy-1-methylethyl acetate:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 - 180 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 500 mg/l<br>Exposure time: 48 h |
| Toxicity to algae/aquatic plants | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1.000 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 201<br><br>NOEC (Pseudokirchneriella subcapitata (algae)): > 1.000 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 201 |
| Toxicity to microorganisms | : | EC10 : > 1.000 mg/l<br>Exposure time: 0,5 h |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: >= 100 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>Method: OECD Test Guideline 211 |

**Xylene:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): 13,5 mg/l<br>Exposure time: 96 h |

| | | |
|---|---|---|
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l<br>Exposure time: 24 h<br>Method: OECD Test Guideline 202<br>Remarks: Based on data from similar materials |
| Toxicity to algae/aquatic plants | : | EC50 (Skeletonema costatum (marine diatom)): 10 mg/l<br>Exposure time: 72 h |
| Toxicity to microorganisms | : | NOEC : > 100 mg/l<br>Exposure time: 3 h<br>Method: OECD Test Guideline 209<br>Remarks: Based on data from similar materials |
| Toxicity to fish (Chronic toxicity) | : | NOEC: > 0,1 - < 1 mg/l<br>Exposure time: 35 d<br>Species: Danio rerio (zebra fish)<br>Method: OECD Test Guideline 210<br>Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | EL10: > 1 - 10 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>Method: OECD Test Guideline 211<br>Remarks: Based on data from similar materials |

**2-Methoxy-1-propanol Acetate:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203<br>Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 100 mg/l<br>Exposure time: 48 h<br>Method: Directive 67/548/EEC, Annex V, C.2.<br>Remarks: Based on data from similar materials |
| Toxicity to algae/aquatic plants | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials<br><br>NOEC (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials |
| Toxicity to microorganisms | : | EC10 : > 1 mg/l<br>Exposure time: 30 min<br>Remarks: Based on data from similar materials |

| | | |
|---|---|---|
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: > 1 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>Method: OECD Test Guideline 211<br>Remarks: Based on data from similar materials |

**Hexamethylene diisocyanate:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC0 (Danio rerio (zebra fish)): 82,8 mg/l<br>Exposure time: 96 h<br>Method: Directive 67/548/EEC, Annex V, C.1. |
| Toxicity to daphnia and other aquatic invertebrates | : | EC0 (Daphnia magna (Water flea)): 89,1 mg/l<br>Exposure time: 48 h<br>Method: Directive 67/548/EEC, Annex V, C.2. |
| Toxicity to algae/aquatic plants | : | EC50 (Desmodesmus subspicatus (green algae)): > 77,4 mg/l<br>Exposure time: 72 h<br>Method: Directive 67/548/EEC, Annex V, C.3.<br><br>NOEC (Desmodesmus subspicatus (green algae)): 11,7 mg/l<br>Exposure time: 72 h<br>Method: Directive 67/548/EEC, Annex V, C.3. |
| Toxicity to microorganisms | : | EC50 : 842 mg/l<br>Exposure time: 3 h |

**12.2 Persistence and degradability**

**Components:**

**Ethyl acetate:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 69 %<br>Exposure time: 20 d |

**Butanone:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 98 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301D |

**n-Butyl acetate:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 83 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301D |

**Hexamethylene diisocyanate, oligomers:**

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 1 %
Exposure time: 28 d
Method: Regulation (EC) No. 440/2008, Annex, C.4-E

**3-Mercaptopropyltrimethoxysilane:**

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 51 %
Exposure time: 28 d
Method: Regulation (EC) No. 440/2008, Annex, C.4-A

**2-Methoxy-1-methylethyl acetate:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 90 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

**Xylene:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: > 70 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

**2-Methoxy-1-propanol Acetate:**

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

**Hexamethylene diisocyanate:**

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 42 %
Exposure time: 28 d
Method: Regulation (EC) No. 440/2008, Annex, C.4-D

### 12.3 Bioaccumulative potential

**Components:**

**Ethyl acetate:**

Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): 30

Partition coefficient: n-octanol/water : log Pow: 0,68

**Butanone:**

Partition coefficient: n-octanol/water : log Pow: 0,3

**n-Butyl acetate:**

Partition coefficient: n-octanol/water : log Pow: 2,3

**Hexamethylene diisocyanate, oligomers:**

Partition coefficient: n-octanol/water : log Pow: > 4
Remarks: Calculation

**3-Mercaptopropyltrimethoxysilane:**

Partition coefficient: n-octanol/water : log Pow: 1,7
Remarks: Calculation

**2-Methoxy-1-methylethyl acetate:**

Partition coefficient: n-octanol/water : log Pow: 1,2

**Xylene:**

Partition coefficient: n-octanol/water : log Pow: 3,16
Remarks: Calculation

**2-Methoxy-1-propanol Acetate:**

Partition coefficient: n-octanol/water : log Pow: 0,52
Remarks: Calculation

**Hexamethylene diisocyanate:**

Partition coefficient: n-octanol/water : log Pow: 0,02
Remarks: Based on data from similar materials

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

**Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Endocrine disrupting properties

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 12.7 Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
Empty containers retain residue and can be dangerous.
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.
If not otherwise specified: Dispose of as unused product.

Waste Code : The following Waste Codes are only suggestions:

used product
08 01 11, waste paint and varnish containing organic solvents or other hazardous substances

unused product
08 01 11, waste paint and varnish containing organic solvents or other hazardous substances

uncleaned packagings
15 01 10, packaging containing residues of or contaminated by hazardous substances

Acc. Packaging Act properly emptied packaging:
Properly emptied, non-contaminated packaging of non-hazardous products can be supplied to a system for the collection of sales packaging.

## SECTION 14: Transport information

### 14.1 UN number or ID number

| | | |
|---|---|---|
| **ADN** | : | UN 1866 |
| **ADR** | : | UN 1866 |
| **RID** | : | UN 1866 |
| **IMDG** | : | UN 1866 |
| **IATA** | : | UN 1866 |

**14.2 UN proper shipping name**

| | | |
|---|---|---|
| **ADN** | : | RESIN SOLUTION |
| **ADR** | : | RESIN SOLUTION |
| **RID** | : | RESIN SOLUTION |
| **IMDG** | : | RESIN SOLUTION |
| **IATA** | : | Resin solution |

**14.3 Transport hazard class(es)**

| | | Class | Subsidiary risks |
|---|---|---|---|
| **ADN** | : | 3 | |
| **ADR** | : | 3 | |
| **RID** | : | 3 | |
| **IMDG** | : | 3 | |
| **IATA** | : | 3 | |

**14.4 Packing group**

**ADN**

| | | |
|---|---|---|
| Packing group | : | II |
| Classification Code | : | F1 |
| Hazard Identification Number | : | 33 |
| Labels | : | 3 |

**ADR**

| | | |
|---|---|---|
| Packing group | : | II |
| Classification Code | : | F1 |
| Hazard Identification Number | : | 33 |
| Labels | : | 3 |
| Tunnel restriction code | : | (D/E) |

**RID**

| | | |
|---|---|---|
| Packing group | : | II |
| Classification Code | : | F1 |
| Hazard Identification Number | : | 33 |
| Labels | : | 3 |

**IMDG**

| | | |
|---|---|---|
| Packing group | : | II |
| Labels | : | 3 |
| EmS Code | : | F-E, S-E |

**IATA (Cargo)**

| | | |
|---|---|---|
| Packing instruction (cargo aircraft) | : | 364 |
| Packing instruction (LQ) | : | Y341 |
| Packing group | : | II |
| Labels | : | Flammable Liquids |

**IATA (Passenger)**

| | | |
|---|---|---|
| Packing instruction (passenger aircraft) | : | 353 |
| Packing instruction (LQ) | : | Y341 |
| Packing group | : | II |
| Labels | : | Flammable Liquids |

### 14.5 Environmental hazards

**ADN**
Environmentally hazardous : no

**ADR**
Environmentally hazardous : no

**RID**
Environmentally hazardous : no

**IMDG**
Marine pollutant : no

### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### 14.7 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable for product as supplied.

## SECTION 15: Regulatory information

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

| | | |
|---|---|---|
| REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) | : | Conditions of restriction for the following entries should be considered: Number on list 75, 3 |
| REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) | | If you intend to use this product as tattoo ink, please contact your vendor. |
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). | : | Not applicable |

| | | |
|---|---|---|
| Regulation (EC) No 1005/2009 on substances that deplete the ozone layer | : | Not applicable |
| Regulation (EU) 2019/1021 on persistent organic pollutants (recast) | : | Not applicable |
| Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals | : | Not applicable |
| REACH - List of substances subject to authorisation (Annex XIV) | : | Not applicable |

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

| | | Quantity 1 | Quantity 2 |
|---|---|---|---|
| P5c | FLAMMABLE LIQUIDS | 5.000 t | 50.000 t |

| | | |
|---|---|---|
| Water hazard class (Germany) | : | WGK 2 obviously hazardous to water<br>Classification according to AwSV, Annex 1 (5.2) |
| Volatile organic compounds | : | Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)<br>Volatile organic compounds (VOC) content: 65,99 % |

**Other regulations:**

TRGS 430 (German regulatory requirements)

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

Take note of Law on the protection of mothers at work, in education and in studies (Maternity Protection Act - MuSchG).

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

| | | |
|---|---|---|
| Other information | : | Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines. |

**Full text of H-Statements**

| | | |
|---|---|---|
| H225 | : | Highly flammable liquid and vapour. |
| H226 | : | Flammable liquid and vapour. |
| H302 | : | Harmful if swallowed. |
| H304 | : | May be fatal if swallowed and enters airways. |

| | | |
|---|---|---|
| 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. |
| H318 | : | Causes serious eye damage. |
| H319 | : | Causes serious eye irritation. |
| H330 | : | Fatal if inhaled. |
| H332 | : | Harmful if inhaled. |
| H334 | : | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335 | : | May cause respiratory irritation. |
| H336 | : | May cause drowsiness or dizziness. |
| H360D | : | May damage the unborn child. |
| H371 | : | May cause damage to organs. |
| H373 | : | May cause damage to organs through prolonged or repeated exposure. |
| H411 | : | Toxic to aquatic life with long lasting effects. |
| H412 | : | Harmful to aquatic life with long lasting effects. |
| EUH066 | : | Repeated exposure may cause skin dryness or cracking. |

**Full text of other abbreviations**

| | | |
|---|---|---|
| Acute Tox. | : | Acute toxicity |
| Aquatic Chronic | : | Long-term (chronic) aquatic hazard |
| Asp. Tox. | : | Aspiration hazard |
| Eye Dam. | : | Serious eye damage |
| Eye Irrit. | : | Eye irritation |
| Flam. Liq. | : | Flammable liquids |
| Repr. | : | Reproductive toxicity |
| Resp. Sens. | : | Respiratory sensitisation |
| Skin Corr. | : | Skin corrosion |
| Skin Irrit. | : | Skin irritation |
| Skin Sens. | : | Skin sensitisation |
| STOT RE | : | Specific target organ toxicity - repeated exposure |
| STOT SE | : | Specific target organ toxicity - single exposure |
| 2000/39/EC | : | Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values |
| 2006/15/EC | : | Europe. Indicative occupational exposure limit values |
| 2017/164/EU | : | Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values |
| 2019/1831/EU | : | Europe. Commission Directive 2019/1831/EU establishing a fifth list of indicative occupational exposure limit values |
| DE TRGS 900 | : | Germany. TRGS 900 - Occupational exposure limit values. |
| TRGS 430 | : | Germany. TRGS 430 - Isocyanates |
| TRGS 903 | : | TRGS 903 - Biological limit values |
| 2000/39/EC / TWA | : | Limit Value - eight hours |
| 2000/39/EC / STEL | : | Short term exposure limit |
| 2006/15/EC / TWA | : | Limit Value - eight hours |
| 2017/164/EU / STEL | : | Short term exposure limit |
| 2017/164/EU / TWA | : | Limit Value - eight hours |
| 2019/1831/EU / TWA | : | Limit Value - eight hours |
| 2019/1831/EU / STEL | : | Short term exposure limit |
| DE TRGS 900 / AGW | : | Time Weighted Average |

TRGS 430 / AGW : Occupational Exposure Limit

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

**Further information**

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

| **Classification of the mixture:** | | **Classification procedure:** |
|---|---|---|
| Flam. Liq. 2 | H225 | Based on product data or assessment |
| Skin Sens. 1 | H317 | Calculation method |
| Eye Irrit. 2 | H319 | Calculation method |
| STOT SE 3 | H336 | Calculation method |
| Aquatic Chronic 3 | H412 | Calculation method |

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

DE / EN