

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)  
according to Regulation (EU) 2020/878

**VFL**  
Vismara Farbladen

Article No.: 78  
Print date: 27.12.2022  
Version: 8.0

DUROX Rost-Umwandler  
Revision date: 10.12.2022  
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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. product identifiers**

Article No. (manufacturer/supplier) 78  
Trade name/designation DUROX Rost-Umwandler

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

**Relevant identified uses:**

Coating material to protecting surfaces

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

**supplier (manufacturer/importer/downstream user/distributor)**

Vismara Unternehmungen CH-5000 Aarau www.farbladen.ch

**Department responsible for information:**

laboratory Manager

E-mail (competent person)

info@knuchel.ch

**1.4. Emergency telephone number**

Emergency telephone number 145 (+41 (0)44 251 51 51)

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008 [CLP]**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Flam. Liq. 2 / H225	Flammable liquids	Highly flammable liquid and vapour.
Skin Irrit. 2 / H315	Skin corrosion/irritation	Causes skin irritation.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
STOT SE 3 / H336	STOT-single exposure	May cause drowsiness or dizziness.
Aquatic Chronic 3 / H412	Hazardous to the aquatic environment	Harmful to aquatic life with long lasting effects.

**2.2. Label elements**

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

**Hazard pictograms**



**Danger**

**Hazard statements**

H225 Highly flammable liquid and vapour.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P103 Read carefully and follow all instructions.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P240 Ground and bond container and receiving equipment.  
P241 Use explosion-proof electrical equipment.  
P242 Use non-sparking tools.  
P243 Take action to prevent static discharges.  
P261 Avoid breathing vapours.  
P264 Wash hands thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves and eye/face protection.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
 P332 + P313 If skin irritation occurs: Get medical advice/attention.  
 P337 + P313 If eye irritation persists: Get medical advice/attention.  
 P362 + P364 Take off contaminated clothing and wash it before reuse.  
 P370 + P378 In case of fire: Use extinguishing powder or sand to extinguish.  
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 P403 + P235 Store in a well-ventilated place. Keep cool.  
 P405 Keep locked up.  
 P501 Dispose of contents/container to industrial incineration plant.

**Hazard components for labelling**

propan-2-ol

**Supplemental hazard information**

EUH208 Contains formaldehyde. May produce an allergic reaction.

**2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients**

**3.2. Mixtures**

**Description** polyisocyanate based preparation, containing the following hazardous substances:

**Classification according to Regulation (EC) No 1272/2008 [CLP]**

EC No. CAS No. Index No.	REACH No. Designation classification // Remark	weight-%
200-661-7 67-63-0 603-117-00-0 215-753-2 1401-55-4	01-2119457558-25 propan-2-ol Flam. Liq. 2 H225 / Eye Irrit. 2 H319 / STOT SE 3 H336 tannic acid Eye Irrit. 2 H319 / Skin Irrit. 2 H315	40 - 60 15 - 25
203-631-1 108-94-1 606-010-00-7	01-2119453616-35 Cyclohexanone Acute Tox. 4 H332 / Flam. Liq. 3 H226 Acute toxicity estimate (ATE), ATE (inhalation, vapour): 11.00 mg/L	5 - 10
215-535-7 1330-20-7 601-022-00-9	01-2119488216-32 Xylene Acute Tox. 4 H312 / Acute Tox. 4 H332 / Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / STOT SE 3 H335 / STOT RE 2 H373 / Asp. Tox. 1 H304 / Flam. Liq. 3 H226	1 - 5
68002-18-6	Urea-formaldehyde resin, butylated Aquatic Chronic 4 H413	1 - 5
215-222-5 1314-13-2 030-013-00-7	01-2119463881-32 zinc oxide Aquatic Acute 1 H400 / Aquatic Chronic 1 H410	0.1 - 0.5
203-632-7 108-95-2 604-001-00-2	01-2119471329-32 Phenol Muta. 2 H341 / Acute Tox. 3 H331 / Acute Tox. 3 H311 / Acute Tox. 3 H301 / STOT RE 2 H373 / Skin Corr. 1B H314 Specific concentration limit (SCL): Skin Corr. 1B H314 >= 3 / Skin Irrit. 2 H315 >= 1 / Eye Irrit. 2 H319 >= 1	0.1 - 0.5

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200-001-8	01-2119488953-20	
50-00-0	formaldehyde	0.01 - 0.05
605-001-00-5	Carc. 1B H350 / Muta. 2 H341 / Acute Tox. 3 H301 / Acute Tox. 3 H311 / Acute Tox. 3 H331 / Skin Corr. 1B H314 / Skin Sens. 1 H317 Specific concentration limit (SCL): Skin Corr. 1B H314 >= 25 / Skin Irrit. 2 H315 >= 5 / Eye Irrit. 2 H319 >= 5 / STOT SE 3 H335 >= 5 / Skin Sens. 1 H317 >= 0.2	

## Additional information

Full text of classification: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

#### In case of inhalation

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

#### Following skin contact

Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.

#### After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

#### Following ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

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

In all cases of doubt, or when symptoms persist, seek medical advice.

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

First Aid, decontamination, treatment of symptoms.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media

alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)

#### Unsuitable extinguishing media

strong water jet

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

Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

### 5.3. Advice for firefighters

Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

## SECTION 6: Accidental release measures

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

Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours.

### 6.2. Environmental precautions

Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

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

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Clean using cleansing agents. Do not use solvents.

### 6.4. Reference to other sections

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Observe protective provisions (see section 7 and 8).

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advices on safe handling

Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Electrical equipment must be protected meeting the accepted standard. Product may become electrostatically charged. Provide earthing of containers, equipment, pumps and ventilation facilities. Anti-static clothing including shoes are recommended. Floors must be electrically conductive. Keep away from heat sources, sparks and open flames. Use only spark proof tools. Avoid contact with skin, eyes and clothes. Do not inhale dusts, particulates and spray mist when using this preparation. Avoid respiration of swarf. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

#### Further information

Vapours are heavier than air. Vapours form explosive mixtures with air.

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

#### Requirements for storage rooms and vessels

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRGS 727)".

#### Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers.

#### Further information on storage conditions

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 15 °C and 30 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

### 7.3. Specific end use(s)

Observe technical data sheet. Observe instructions for use.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limit values:

propan-2-ol

Index No. 603-117-00-0 / EC No. 200-661-7 / CAS No. 67-63-0

WEL, TWA: 999 mg/m<sup>3</sup>; 400 ppm

WEL, STEL: 1250 mg/m<sup>3</sup>; 500 ppm

Cyclohexanone

Index No. 606-010-00-7 / EC No. 203-631-1 / CAS No. 108-94-1

WEL, TWA: 41 mg/m<sup>3</sup>; 10 ppm

WEL, STEL: 82 mg/m<sup>3</sup>; 20 ppm

Remark: (may be absorbed through the skin)

BMGV, TWA: 2 mmol/mol creatinine

Remark: cyclohexanol; urine; end of exposure or end of shift

Xylene

Index No. 601-022-00-9 / EC No. 215-535-7 / CAS No. 1330-20-7

WEL, TWA: 220 mg/m<sup>3</sup>; 50 ppm

WEL, STEL: 441 mg/m<sup>3</sup>; 100 ppm

Remark: (may be absorbed through the skin)

BMGV, TWA: 650 mmol/mol creatinine

Remark: methyl hippuric acid; urine; end of exposure or end of shift

Phenol

Index No. 604-001-00-2 / EC No. 203-632-7 / CAS No. 108-95-2

WEL, TWA: 7.8 mg/m<sup>3</sup>; 2 ppm

WEL, STEL: 16 mg/m<sup>3</sup>; 4 ppm

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Remark: (may be absorbed through the skin)

formaldehyde

Index No. 605-001-00-5 / EC No. 200-001-8 / CAS No. 50-00-0

WEL, TWA: 2.5 mg/m<sup>3</sup>; 2 ppm

WEL, STEL: 2.5 mg/m<sup>3</sup>; 2 ppm

## Additional information

TWA : Long-term occupational exposure limit value

STEL : short-term occupational exposure limit value

Ceiling : peak limitation

## DNEL:

Xylene

Index No. 601-022-00-9 / EC No. 215-535-7 / CAS No. 1330-20-7

DNEL long-term dermal (systemic), Workers: 212 mg/kg bw/day

DNEL acute inhalative (local), Workers: 442 mg/m<sup>3</sup>

DNEL acute inhalative (systemic), Workers: 442 mg/m<sup>3</sup>

DNEL long-term inhalative (local), Workers:

DNEL long-term inhalative (systemic), Workers: 221 mg/m<sup>3</sup>

DNEL long-term oral (repeated), Consumer: 12,5 mg/kg bw/day

DNEL long-term dermal (systemic), Consumer: 125 mg/kg bw/day

DNEL acute inhalative (local), Consumer: 260 mg/m<sup>3</sup>

DNEL acute inhalative (systemic), Consumer: 260 mg/m<sup>3</sup>

DNEL long-term inhalative (local), Consumer: 65,3 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Consumer: 65,3 mg/m<sup>3</sup>

Cyclohexanone

Index No. 606-010-00-7 / EC No. 203-631-1 / CAS No. 108-94-1

DNEL acute dermal, short-term (systemic), Workers: 100 mg/kg bw/day

DNEL long-term dermal (systemic), Workers: 10 mg/kg bw/day

DNEL acute inhalative (local), Workers: 100 mg/m<sup>3</sup>

DNEL acute inhalative (systemic), Workers: 100 mg/m<sup>3</sup>

DNEL long-term inhalative (local), Workers: 20 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Workers: 20 mg/m<sup>3</sup>

:

The substance is skin resorptive (can enter the body through the skin).

DNEL long-term oral (repeated), Consumer: 5 mg/kg bw/day

DNEL acute dermal, short-term (systemic), Consumer: 30 mg/kg bw/day

DNEL long-term dermal (systemic), Consumer: 20 mg/kg bw/day

DNEL acute inhalative (local), Consumer: 50 mg/m<sup>3</sup>

DNEL acute inhalative (systemic), Consumer: 50 mg/m<sup>3</sup>

DNEL long-term inhalative (local), Consumer: 20 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Consumer: 20 mg/m<sup>3</sup>

DNEL acute oral (systemic): 10 mg/kg bw/day

propan-2-ol

Index No. 603-117-00-0 / EC No. 200-661-7 / CAS No. 67-63-0

DNEL acute dermal, short-term (systemic), Workers: 888 mg/kg bw/day

DNEL long-term inhalative (systemic), Workers: 500 mg/m<sup>3</sup>

DNEL long-term oral (repeated), Consumer: 26 mg/kg bw/day

DNEL long-term dermal (systemic), Consumer: 319 mg/kg bw/day

DNEL long-term inhalative (systemic), Consumer: 89 mg/m<sup>3</sup>

Urea-formaldehyde resin, butylated

CAS No. 68002-18-6

DNEL long-term inhalative (local), Workers: 9,5 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Workers: 9,5 mg/m<sup>3</sup>

DNEL acute inhalative (local), Consumer: 9,5 mg/m<sup>3</sup>

DNEL acute inhalative (systemic), Consumer: 9,5 mg/m<sup>3</sup>

DNEL long-term inhalative (local), Consumer: 3 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Consumer: 3 mg/m<sup>3</sup>

## PNEC:

Xylene

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Index No. 601-022-00-9 / EC No. 215-535-7 / CAS No. 1330-20-7

PNEC aquatic, freshwater: 0,327 mg/L  
PNEC aquatic, marine water: 0,327 mg/L  
PNEC sediment, freshwater: 12,46 mg/kg  
PNEC sediment, marine water: 12,46 mg/kg  
PNEC sewage treatment plant (STP): 6,58 mg/L  
soil: 2,31 mg/kg

Cyclohexanone

Index No. 606-010-00-7 / EC No. 203-631-1 / CAS No. 108-94-1

PNEC aquatic, freshwater: 0,0329 mg/L  
PNEC aquatic, marine water: 0,0032 mg/L  
PNEC aquatic, intermittent release: 0,329 mg/L  
PNEC sediment, freshwater: 0,0951 mg/kg Sediment dry weight  
PNEC, soil: 0,0143 mg/kg dw  
PNEC sewage treatment plant (STP): 10 mg/L

propan-2-ol

Index No. 603-117-00-0 / EC No. 200-661-7 / CAS No. 67-63-0

PNEC aquatic, freshwater: 140,9 mg/L  
PNEC aquatic, marine water: 140,9 mg/L  
PNEC aquatic, intermittent release: 140,9 mg/L  
PNEC sediment, freshwater: 552 mg/kg dw  
PNEC sediment, marine water: 552 mg/kg dw  
PNEC, soil: 28 mg/kg  
PNEC sewage treatment plant (STP): 2251 mg/L  
PNEC Secondary Poisoning: 160 mg/kg food

Urea-formaldehyde resin, butylated

CAS No. 68002-18-6

PNEC aquatic, freshwater: 2 mg/L  
PNEC aquatic, marine water: 0,2 mg/L  
PNEC sediment, freshwater: 13,4 mg/kg  
PNEC sediment, marine water: 1,34 mg/kg  
PNEC sewage treatment plant (STP): 7,2 mg/L

## 8.2. Exposure controls

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

### Personal protection equipment

#### **Respiratory protection**

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Use only respiratory protection equipment with CE-symbol including four digit test number.

#### **Hand protection**

For prolonged or repeated handling the following glove material must be used: NBR (Nitrile rubber)

Thickness of the glove material > 0,4 mm ; Breakthrough time: > 480 min.

Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles EN ISO 374

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

#### **Eye/face protection**

Wear closely fitting protective glasses in case of splashes.

#### **Body protection**

Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.

#### **Protective measures**

After contact clean skin thoroughly with water and soap or use appropriate cleanser.

#### **Environmental exposure controls**

Do not allow to enter into surface water or drains. See section 7. No additional measures necessary.

## **SECTION 9: Physical and chemical properties**

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

**Physical state:** Liquid

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<b>Colour:</b>	<b>refer to label</b>
<b>Odour:</b>	<b>characteristic</b>
<b>Odour threshold:</b>	<b>not applicable</b>
<b>Melting point/freezing point:</b>	<b>not applicable</b>
<b>Initial boiling point and boiling range:</b>	<b>78 °C</b> Source: Ethanol
<b>Flammability:</b>	<b>Highly flammable liquid and vapour.</b>
<b>Lower and upper explosion limit:</b>	
<b>Lower explosion limit:</b>	<b>2.08 Vol-%</b>
<b>Upper explosion limit:</b>	<b>15 Vol-%</b> Source: Ethanol
<b>Flash point:</b>	<b>12 °C</b> Method: DIN 53213
<b>Auto-ignition temperature:</b>	<b>425 °C</b> Source: Ethanol
<b>Decomposition temperature:</b>	<b>not applicable</b>
<b>pH at 20 °C:</b>	<b>not applicable</b>
<b>Cinematic viscosity (40°C):</b>	<b>20 mm<sup>2</sup>/s</b>
<b>Viscosity at 20 °C:</b>	<b>12 - 15 sec DIN 4 mm</b>
<b>Solubility(ies):</b>	
<b>Water solubility at 20 °C:</b>	<b>partially soluble</b>
<b>Partition coefficient: n-octanol/water:</b>	<b>see section 12</b>
<b>Vapour pressure at 20 °C:</b>	<b>59 mbar</b> Source: Ethanol
<b>Density and/or relative density:</b>	
<b>Density at 20 °C:</b>	<b>0.86 g/cm<sup>3</sup></b>
<b>Relative vapour density:</b>	<b>not applicable</b>
<b>particle characteristics:</b>	<b>not applicable</b>
9.2. <b>Other information</b>	
<b>Solid content:</b>	<b>22 weight-%</b>
<b>solvent content:</b>	
<b>Organic solvents:</b>	<b>72 weight-%</b>
<b>Water:</b>	<b>6 weight-%</b>

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No information available.

### 10.2. Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

### 10.3. Possibility of hazardous reactions

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

### 10.4. Conditions to avoid

Hazardous decomposition byproducts may form with exposure to high temperatures.

### 10.5. Incompatible materials

not applicable

### 10.6. Hazardous decomposition products

Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

## SECTION 11: Toxicological information

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

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## Acute toxicity

### Xylene

oral, LD50, Rat, male: 5,523 mg/kg  
Method: EU Test B.1  
inhalative (vapours), LC50, Rat, male: 6700 ppm (4 h)

### Cyclohexanone

oral, LD50, Rat: 1535 mg/kg  
dermal, LD50, Rabbit: 948 mg/kg  
inhalative (vapours), LC50, Rat: 11 mg/L (4 h)

### propan-2-ol

oral, LD50, Rat: 5840 mg/kg  
Method: OECD 401  
dermal, LD50, Rabbit: 13900 mg/kg  
Method: OECD 402  
inhalative (vapours), LC50, Rat: > 25 mg/L (6 h)  
Method: OECD 403

### Urea-formaldehyde resin, butylated

oral, LD50, Rat: 730 mg/kg  
Method: OECD 401  
inhalative (vapours), LC50, Rat: 7,85 mg/L (4 h)  
Method: OECD 403

## Skin corrosion/irritation; Serious eye damage/eye irritation

Causes skin irritation.

Causes serious eye irritation.

### Cyclohexanone

Skin (4 h)  
Method: OECD 404  
Irritating to skin and mucous membranes.  
eyes

### propan-2-ol

Skin (4 h)  
Method: OECD 404  
Degreases the skin and makes it dry and rough. ; Prolonged or repeated contact may cause dermatitis.  
eyes  
Method: OECD 405  
Splashes in the eyes can cause severe pain. Steam is irritant.

### Urea-formaldehyde resin, butylated

Skin, Rabbit (4 h)  
Method: OECD 404  
eyes  
Causes serious eye damage.; Risk of blindness!

## Respiratory or skin sensitisation

### Cyclohexanone

Skin: ; Evaluation not sensitising.  
Respiratory system: ; Evaluation not sensitising.

### propan-2-ol

Skin, Guinea pig: ; Evaluation not sensitising.  
Method: OECD 406  
Buhler test

### Urea-formaldehyde resin, butylated

Skin, Guinea pig: ; Evaluation negative  
Method: OECD 406  
Buhler test

## CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

### Cyclohexanone

Germ cell mutagenicity; Evaluation Based on available data, the classification criteria are not met.



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Carcinogenicity; Evaluation Based on available data, the classification criteria are not met.  
Reproductive toxicity; Evaluation Based on available data, the classification criteria are not met.  
teratogenicity; Evaluation Based on available data, the classification criteria are not met.

## propan-2-ol

Germ cell mutagenicity; Evaluation In vitro tests showed no mutagenic effects.  
Carcinogenicity; Evaluation Based on available data, the classification criteria are not met.  
Reproductive toxicity; Evaluation In vitro tests showed no mutagenic effects.  
Method: NOAEL (Parents)  
853 mg/kg body weight/day (One-generation reproductive toxicity study; rat, Wistar, male and female)(Oral)(OECD Test Guideline 415)No negative effects. ; 500 mg/kg body weight/day (Two-generation reproductive toxicity test; rat, Sprague-Dawley, male and female)(Oral)(OECD Test Guideline 416)No negative effects.  
teratogenicity; Evaluation In vitro tests showed no mutagenic effects.  
Genotoxicity in vitro; Evaluation negative  
(Back mutation test on bacteria; Salmonella typhimurium; with and without metabolic activation) (OECD test guideline 471)  
negative (in vitro gene mutation test on mammalian cells; CHO (Chinese hamster ovaries) cells; with and without metabolic activation) (OECD test guideline 476)  
Genotoxicity in vivo; Evaluation negative  
Method: OECD 474  
(In vivo microkernel test; mouse, CD1) (intraperitoneal; )

## Urea-formaldehyde resin, butylated

Germ cell mutagenicity; Evaluation negative  
Method: OECD 479  
Genotoxicity in vitro; sister chromatid exchange assay; Lung cells from Chinese hamster  
Carcinogenicity  
Showed no carcinogenic effect in animal experiments.  
Reproductive toxicity  
No impairment of reproductive ability in animal experiments. (IUCLID)  
Germ cell mutagenicity; Evaluation negative  
Method: OECD 471 (Ames test)  
Salmonella typhimurium  
Germ cell mutagenicity; Evaluation negative  
Method: OECD 476  
In vitro gene mutation test on mammalian cells ; Ovarian cells of Chinese hamster

## STOT-single exposure; STOT-repeated exposure

May cause drowsiness or dizziness.

## Xylene

Specific target organ toxicity (repeated exposure)  
Liver and kidney damage; central nervous system  
Causes damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).  
Liver and kidney damage; central nervous system; hearing organs

## Cyclohexanone

Specific target organ toxicity (single exposure) Evaluation Inhalation of high vapour concentrations can lead to CNS depression and anesthesia.  
headache; Unconsciousness  
Specific target organ toxicity (repeated exposure)  
No data available

## propan-2-ol

Specific target organ toxicity (single exposure)  
central nervous system; May cause drowsiness or dizziness.  
Specific target organ toxicity (repeated exposure)  
Repeated oral and inhalative exposure studies have shown that effects in target organs in both male rats (kidney) and male and female mice (thyroid gland) cannot be related to humans.

## Urea-formaldehyde resin, butylated

Specific target organ toxicity (single exposure)  
No data available  
Specific target organ toxicity (repeated exposure)  
No data available

## Aspiration hazard

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Cyclohexanone  
Aspiration hazard  
No data available

propan-2-ol  
Aspiration hazard; Evaluation Based on available data, the classification criteria are not met.  
Danger of aspiration if swallowed - can get into the lungs and damage them.; Aspiration can lead to pulmonary edema and pneumonia.

Urea-formaldehyde resin, butylated  
Aspiration hazard  
No data available

## Practical experience/human evidence

Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are: headache, dizziness, fatigue, amyosthenia, drowsiness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

## Overall assessment on CMR properties

EC No. CAS No.	Designation	Classification according to Regulation (EC) No 1272/2008 [CLP]
200-001-8 50-00-0	formaldehyde	Carc. 1B

## 11.2. Information on other hazards

**Endocrine disrupting properties**  
No information available.

## SECTION 12: Ecological information

Classification according to Regulation (EC) No 1272/2008 [CLP]  
Do not allow to enter into surface water or drains.

### 12.1. Toxicity

#### Xylene

Fish toxicity, LC50, fish: 2,6 mg/L (96 h)  
Method: OECD 203  
Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 4,6 mg/L (72 h)  
Method: OECD 201  
Algae toxicity, EC50, Pseudokirchneriella subcapitata: 4,6 mg/L (72 h)  
Method: OECD 201  
Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout) (96 h)  
Method: OECD 203  
Daphnia toxicity, IC50, Daphnia magna: 1 mg/L (24 h)  
Method: OECD 202  
Algae toxicity, EC50, Selenastrum capricornutum: 2,2 mg/L (73 h)  
Method: OECD 201  
Daphnia toxicity, growth test (Eb-Cx) 10%“, Daphnia magna: 1,91 mg/L (21 d)  
Method: OECD 211  
Bacteria toxicity, NOEC, Activated sludge: 16 mg/L (28 t)  
Method: OECD 301 F

#### Cyclohexanone

Fish toxicity, LC50, Pimephales promelas (fathead minnow) 527 - 732 mg/L (96 h)  
Daphnia toxicity, EC50: 820 mg/L (48 h)  
Fish toxicity, LC50, Leuciscus idus (golden orfe) 536 - 752 (48 h)  
Daphnia toxicity, LC50, Daphnia magna (Big water flea): 800 mg/L (24 h)  
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 820 (24 h)  
Algae toxicity, EC50, Chlamydomonas reinhardtii: 32,9 mg/L (72 h)  
Algae toxicity, EC10, Chlamydomonas reinhardtii: 3,56 mg/L (72 h)

#### propan-2-ol

Fish toxicity, LC50, Pimephales promelas (fathead minnow): 9640 mg/L (96 h)

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Method: OECD 203  
Daphnia toxicity, Daphnia magna: 9714 mg/L (24 h)  
Method: OECD 202  
Static test  
Algae toxicity, EC50, Scenedesmus subspicatus: > 100 mg/L (72 h)  
Algae toxicity, LOEC: 1000 mg/L (8 d)  
Bacteria toxicity: 100 mg/L ; Evaluation No harmful effect

Urea-formaldehyde resin, butylated

Fish toxicity, LC50, Leuciscus idus (golden orfe) 46 - 100 mg/L (96 h)  
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 34,2 mg/L (48 h)  
Algae toxicity, IC50, Desmodesmus subspicatus: 27 mg/L (72 h)

## Long-term Ecotoxicity

Harmful to aquatic life with long lasting effects.

Xylene

Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 4,36 mg/L (73 h)  
Method: OECD 201  
Fish toxicity, NOEC, fish: > 1,3 mg/L (56 d)  
Daphnia toxicity, NOEC, Daphnia pulex (water flea): 1,17 mg/L (7 d)  
Method: US EPA 600/4-91-003  
Daphnia toxicity, EL50, Daphnia magna: 2,9 mg/L (21 d)  
Method: OECD 211  
Algae toxicity, EC50, Pseudokirchneriella subcapitata: 2,2 mg/L (73 h)  
Method: OECD 201  
Daphnia toxicity, LOEC:, Daphnia magna (Big water flea): 3,16 mg/L (21 d)  
Method: OECD 211  
Algae toxicity, growth test (Eb-Cx) 10%“, Pseudokirchneriella subcapitata: 0,72 mg/L (73 h)  
Method: OECD 201

## 12.2. Persistence and degradability

Xylene

Persistence and degradability:  
Method: Rapid photochemical oxidation in air  
Biodegradation: 98 percent (28 d)  
Readily biodegradable (according to OECD criteria)

Cyclohexanone

Persistence and degradability:  
No data available  
Biodegradation: 90 - 100 percent (28 d); Evaluation Readily biodegradable (according to OECD criteria) ; Exposure duration: 14 days = 87 %

propan-2-ol

Persistence and degradability:  
Transformation by hydrolysis is not expected to be significant.  
Biodegradation: 53 percent ; Evaluation Readily biodegradable (according to OECD criteria).  
aerobic; domestic waste water; related to: O2 consumption; exposure duration: 5d)(Directive 67/548/EEC, Annex V, C.5.

Urea-formaldehyde resin, butylated

Biodegradation: 100 percent (28 d); Evaluation Readily biodegradable (according to OECD criteria)  
Method: OECD 301C

## 12.3. Bioaccumulative potential

Xylene

Distribution coefficient n-octanol/water (log KOW): 3,49

Cyclohexanone

Distribution coefficient n-octanol/water (log KOW): 0,86 ; Evaluation The product has a low bioaccumulation potential

propan-2-ol

Distribution coefficient n-octanol/water (log KOW): 0,05 ; Evaluation Bioaccumulation is not to be expected.

## 12.4. Mobility in soil

Xylene

soil: Evaluation Absorbs slowly into the soil  
Water: Evaluation Floats on the water

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Cyclohexanone  
soil: Evaluation Highly mobile in the ground

propan-2-ol  
Water: Evaluation The product is water soluble.  
soil: Evaluation Mobile in the ground

Urea-formaldehyde resin, butylated  
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

No information available.

## 12.7. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Appropriate disposal / Product Recommendation

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Dispose of waste according to applicable legislation.

#### List of proposed waste codes/waste designations in accordance with EWC

080111\* Waste paint and varnish containing organic solvents or other dangerous substances

\*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

#### Appropriate disposal / Package Recommendation

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

## SECTION 14: Transport information

### 14.1. UN number or ID number

UN 1263

### 14.2. UN proper shipping name

Land transport (ADR/RID): Paint  
Sea transport (IMDG): PAINT  
Air transport (ICAO-TI / IATA-DGR): Paint

### 14.3. Transport hazard class(es)

3

### 14.4. Packing group

II

### 14.5. Environmental hazards

Land transport (ADR/RID) not applicable  
Marine pollutant not applicable

### 14.6. Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

#### Further information

#### Land transport (ADR/RID)

Tunnel restriction code D/E

#### Sea transport (IMDG)

EmS-No. F-E, S-E

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

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No transport as bulk according IBC - Code.

**SECTION 15: Regulatory information**

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

**EU legislation**

**Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]**

VOC-value (in g/L): 624

**National regulations**

**Restrictions of occupation**

Observe employment restrictions under the Maternity Protection Directive 92/85/EEC or stricter national regulations, if applicable.

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC) or stricter national regulations, if applicable.

**15.2. Chemical Safety Assessment**

**For the following substances of this mixture a chemical safety assessment has been carried out:**

EC No. CAS No.	Designation	REACH No.
200-661-7 67-63-0	propan-2-ol	01-2119457558-25
203-631-1 108-94-1	Cyclohexanone	01-2119453616-35
215-535-7 1330-20-7	Xylene	01-2119488216-32
215-222-5 1314-13-2	zinc oxide	01-2119463881-32
203-632-7 108-95-2	Phenol	01-2119471329-32
200-001-8 50-00-0	formaldehyde	01-2119488953-20

**SECTION 16: Other information**

**Full text of classification in section 3**

Flam. Liq. 2 / H225	Flammable liquids	Highly flammable liquid and vapour.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
STOT SE 3 / H336	STOT-single exposure	May cause drowsiness or dizziness.
Skin Irrit. 2 / H315	Skin corrosion/irritation	Causes skin irritation.
Acute Tox. 4 / H332	Acute toxicity (inhalative)	Harmful if inhaled.
Flam. Liq. 3 / H226	Flammable liquids	Flammable liquid and vapour.
Acute Tox. 4 / H312	Acute toxicity (dermal)	Harmful in contact with skin.
STOT SE 3 / H335	STOT-single exposure	May cause respiratory irritation.
STOT RE 2 / H373	STOT-repeated exposure	May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
Asp. Tox. 1 / H304	Aspiration hazard	May be fatal if swallowed and enters airways.
Aquatic Chronic 4 / H413	Hazardous to the aquatic environment	May cause long lasting harmful effects to aquatic life.
Aquatic Acute 1 / H400	Hazardous to the aquatic environment	Very toxic to aquatic organisms.
Aquatic Chronic 1 / H410	Hazardous to the aquatic environment	Very toxic to aquatic life with long lasting effects.
Muta. 2 / H341	Germ cell mutagenicity	Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
Acute Tox. 3 / H331	Acute toxicity (inhalative)	Toxic if inhaled.
Acute Tox. 3 / H311	Acute toxicity (dermal)	Toxic in contact with skin.
Acute Tox. 3 / H301	Acute toxicity (oral)	Toxic if swallowed.
Skin Corr. 1B / H314	Skin corrosion/irritation	Causes severe skin burns and eye damage.
Carc. 1B / H350	Carcinogenicity	May cause cancer (state route of exposure if it

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Skin Sens. 1 / H317

Respiratory or skin sensitisation

is conclusively proven that no other routes of exposure cause the hazard).  
May cause an allergic skin reaction.

## Classification procedure

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

Flam. Liq. 2	Flammable liquids	On basis of test data.
Skin Irrit. 2	Skin corrosion/irritation	Calculation method.
Eye Irrit. 2	Serious eye damage/eye irritation	Calculation method.
STOT SE 3	STOT-single exposure	Calculation method.
Aquatic Chronic 3	Hazardous to the aquatic environment	Calculation method.

## Abbreviations and acronyms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL	Occupational Exposure Limit Value
BLV	Biological Limit Value
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	Carcinogenic, Mutagenic and Reprotoxic
DIN	German Institute for Standardization / German industrial standard
DNEL	Derived No-Effect Level
EAKV	European Waste Catalogue Directive
EC	Effective Concentration
EC	European Community
EN	European Standard
IATA-DGR	International Air Transport Association – Dangerous Goods Regulations
IBC Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI	International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG Code	International Maritime Code for Dangerous Goods
ISO	International Organization for Standardization
LC	Lethal Concentration
LD	Lethal Dose
MARPOL	Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OECD	Organisation for Economic Cooperation and Development
PBT	persistent, bioaccumulative, toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
UN	United Nations
VOC	Volatile Organic Compounds
vPvB	very persistent and very bioaccumulative

## Further information

Classification according to Regulation (EC) No 1272/2008 [CLP]

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in section 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.