

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



Article No.: 1534  
Print date: 14.08.2023  
Version: 8

Hardener DOWACOAT ETB  
Revision date: 30.06.2023  
Issue date: 30.06.2023

EN  
Page 1 / 14

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

**1.1. product identifiers**

Article No. (manufacturer/supplier) 1534  
Trade name/designation Hardener DOWACOAT ETB  
Typ 9900

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

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

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

Eclatin AG  
Lack- und Farbenfabrik Telephone: +41 32 622 41 41  
Bürenstrasse 131 Telefax: +41 32 623 91 23  
CH-4574 Lüsslingen

**Department responsible for information:**

Labor  
E-mail info@eclatin.ch

**1.4. Emergency telephone number**

Emergency telephone number +41 32 622 41 41  
Toxikologisches Zentrum 145 (+41 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].

Acute Tox. 4 / H302	Acute toxicity (oral)	Harmful if swallowed.
Skin Corr. 1B / H314	Skin corrosion/irritation	Causes severe skin burns and eye damage.
Eye Dam. 1 / H318	Serious eye damage/eye irritation	Causes serious eye damage.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
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**

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P260 Do not breathe vapour.  
P280 Wear protective gloves and eye/face protection.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER or doctor/ physician.

**Hazard components for labelling**

benzyl alcohol  
m-Xylylenediamine  
Meinten Sie: m-Xylylenediamine  
m-xylylenediamine  
Reactionproduct of 4,4'-Isopropylidenediphenol, 1-chloro-2,3-epoxypropane and  
m-phenylenebis(methylamine)  
4,4'-methylenebis(cyclohexylamine)

**Supplemental hazard information**

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



Article No.: 1534  
Print date: 14.08.2023  
Version: 8

Hardener DOWACOAT ETB  
Revision date: 30.06.2023  
Issue date: 30.06.2023

EN  
Page 2 / 14

not applicable

**2.3. Other hazards**

No information available.

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

**3.2. Mixtures**

**Description** Polyamine

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

EC No. CAS No. Index No.	REACH No. Designation classification // Remark	weight-%
202-859-9 100-51-6 603-057-00-5	01-2119492630-38 benzyl alcohol Acute Tox. 4 H332 / Acute Tox. 4 H302 Acute toxicity estimate (ATE), ATE (oral): 1 mg/kg bw	25 - 40
216-032-5 1477-55-0	01-2119480150-50 m-Xylylenediamine Meinten Sie: m-Xylylenediamine m-xylylenediamine Acute Tox. 4 H302 / Acute Tox. 3 H331 / Skin Corr. 1B H314 / Skin Sens. 1 H317 / Aquatic Chronic 3 H412 Acute toxicity estimate (ATE), ATE (oral): 1200 mg/kg bw	15 - 25
135108-88-2	Polymer with formaldehyde and benzylamine hydrogenated Polymer with formaldehyde and benzylamine hydrogenated Acute Tox. 3 H301 / Skin Corr. 1C H314 / Eye Dam. 1 H318 / Skin Sens. 1 H317 / STOT RE 2 H373 / Aquatic Chronic 3 H412 Acute toxicity estimate (ATE), ATE (oral): 368 mg/kg bw	15 - 25
500-302-7 113930-69-1	01-2119965162-39 Reactionproduct of 4,4'-Isopropylidenediphenol, 1-chloro-2,3-epoxypropane and m-phenylenebis(methylamine) Skin Corr. 1B H314 / Eye Dam. 1 H318 / Skin Sens. 1B H317 / Aquatic Chronic 2 H411	15 - 25
217-168-8 1761-71-3	01-2119541673-38 4,4'-methylenebis (cyclohexylamine) Acute Tox. 4 H302 / Skin Corr. 1B H314 / Eye Dam. 1 H318 / Skin Sens. 1 H317 / STOT RE 2 H373 / Aquatic Chronic 2 H411 Acute toxicity estimate (ATE), ATE (oral): 380 mg/kg bw	1 - 5

**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.

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



Article No.: 1534  
Print date: 14.08.2023  
Version: 8

Hardener DOWACOAT ETB  
Revision date: 30.06.2023  
Issue date: 30.06.2023

EN  
Page 3 / 14

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**

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

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



Article No.: 1534  
Print date: 14.08.2023  
Version: 8

Hardener DOWACOAT ETB  
Revision date: 30.06.2023  
Issue date: 30.06.2023

EN  
Page 4 / 14

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:**

not applicable

**DNEL:**

benzyl alcohol

Index No. 603-057-00-5 / EC No. 202-859-9 / CAS No. 100-51-6

DNEL acute dermal, short-term (systemic), Workers: 40 mg/kg

DNEL long-term dermal (systemic), Workers: 8 mg/kg

DNEL acute inhalative (systemic), Workers: 110 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Workers: 22 mg/m<sup>3</sup>

DNEL acute dermal, short-term (systemic), Consumer: 20 mg/kg

DNEL long-term dermal (systemic), Consumer: 4 mg/kg

DNEL acute inhalative (systemic), Consumer: 27 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Consumer: 5,4 mg/m<sup>3</sup>

Polymer with formaldehyde and benzylamine hydrogenated

Polymer with formaldehyde and benzylamine hydrogenated

CAS No. 135108-88-2

DNEL acute dermal, short-term (systemic), Workers: 6 mg/kg bw/day

DNEL long-term dermal (systemic), Workers: 2 mg/kg bw/day

DNEL acute inhalative (systemic), Workers: 2 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Workers: 0,2 mg/m<sup>3</sup>

4,4'-methylenebis (cyclohexylamine)

EC No. 217-168-8 / CAS No. 1761-71-3

DNEL long-term dermal (systemic), Workers: 0,1 mg/kg dw

DNEL long-term inhalative (systemic), Workers: 1 mg/m<sup>3</sup>

DNEL long-term oral (repeated), Consumer: 0,06 mg/kg dw

DNEL long-term inhalative (systemic), Consumer: 0,21 mg/m<sup>3</sup>

Reactionproduct of 4,4'-Isopropylidenediphenol, 1-chloro-2,3-epoxypropane and m-phenylenebis(methylamine)

EC No. 500-302-7 / CAS No. 113930-69-1

DNEL long-term dermal (systemic), Workers: 1,33 mg/kg bw/day

DNEL acute inhalative (systemic), Workers: 6,99 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Workers: 3,27 mg/m<sup>3</sup>

DNEL short-term oral (acute), Consumer:

DNEL long-term oral (repeated), Consumer: 0,33 mg/kg bw/day

DNEL long-term dermal (systemic), Consumer: 0,66 mg/kg bw/day

DNEL acute inhalative (systemic), Consumer: 1,5 mg/m<sup>3</sup>

DNEL long-term inhalative (systemic), Consumer: 0,5 mg/m<sup>3</sup>

DNEL short-term oral (systemic), Consumer: 0,99 mg/kg bw/day

**PNEC:**

benzyl alcohol

Index No. 603-057-00-5 / EC No. 202-859-9 / CAS No. 100-51-6

PNEC aquatic, freshwater: 1 mg/L

PNEC aquatic, marine water: 0,1 mg/L

PNEC aquatic, intermittent release: 2,3 mg/L

PNEC sediment, freshwater: 5,27 mg/kg

PNEC sediment, marine water: 0,527 mg/kg

PNEC, soil: 0,456 mg/kg

PNEC sewage treatment plant (STP): 39 mg/L

Polymer with formaldehyde and benzylamine hydrogenated

Polymer with formaldehyde and benzylamine hydrogenated

CAS No. 135108-88-2

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



Article No.: 1534 Hardener DOWACOAT ETB  
Print date: 14.08.2023 Revision date: 30.06.2023  
Version: 8 Issue date: 30.06.2023

EN  
Page 5 / 14

PNEC aquatic, freshwater: 0,015 mg/L  
PNEC aquatic, marine water: 0,002 mg/L  
PNEC sediment, freshwater: 15 mg/kg  
PNEC sediment, marine water: 1,5 mg/kg  
PNEC, soil: 1,8 mg/kg

4,4'-methylenebis (cyclohexylamine)

EC No. 217-168-8 / CAS No. 1761-71-3

PNEC aquatic, freshwater: 0,08 mg/L  
PNEC aquatic, marine water: 0,008 mg/L  
PNEC sediment, freshwater: 137 mg/kg  
PNEC sediment, marine water: 13,7 mg/kg  
PNEC, soil: 27,2 mg/kg  
PNEC sewage treatment plant (STP): 3,2 mg/L

Reactionproduct of 4,4'-Isopropylidenediphenol, 1-chloro-2,3-epoxypropane and m-phenylenebis(methylamine)

EC No. 500-302-7 / CAS No. 113930-69-1

PNEC aquatic, freshwater: 0,002 mg/L  
PNEC aquatic, marine water: < 0,0001 mg/L  
PNEC aquatic, intermittent release: 0,021 mg/L  
PNEC sediment, freshwater: 2,08 mg/kg  
PNEC, soil: 0,41 mg/kg  
PNEC sewage treatment plant (STP): 3,1 mg/L  
PNEC Secondary Poisoning: 3,33 mg/kg

## 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

<b>Physical state:</b>	<b>Liquid</b>
<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>206 °C</b> Source: benzyl alcohol
<b>Flammability:</b>	<b>Combustible liquid.</b>
<b>Lower and upper explosion limit:</b>	

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



Article No.: 1534  
Print date: 14.08.2023  
Version: 8

Hardener DOWACOAT ETB  
Revision date: 30.06.2023  
Issue date: 30.06.2023

EN  
Page 6 / 14

<b>Lower explosion limit:</b>	<b>1.3 Vol-%</b>
<b>Upper explosion limit:</b>	<b>13 Vol-%</b> Source: benzyl alcohol
<b>Flash point:</b>	<b>110 °C</b> Method: DIN 53213
<b>Auto-ignition temperature:</b>	<b>435 °C</b> Source: benzyl alcohol
<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>4594.32 mm<sup>2</sup>/s</b>
<b>Viscosity at 20 °C:</b>	<b>5000 mPa<sup>s</sup></b> Method: 1/D 1250
<b>Solubility(ies):</b>	
<b>Water solubility at 20 °C:</b>	<b>insoluble</b>
<b>Partition coefficient: n-octanol/water:</b>	<b>see section 12</b>
<b>Vapour pressure at 20 °C:</b>	<b>not applicable</b>
<b>Density and/or relative density:</b>	
<b>Density at 20 °C:</b>	<b>1.09 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. **Other information**

<b>Solid content:</b>	<b>67 weight-%</b>
<b>solvent content:</b>	
<b>Organic solvents:</b>	<b>33 weight-%</b>
<b>Water:</b>	<b>0 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**

**Acute toxicity**

Harmful if swallowed.

benzyl alcohol

oral, LD50, Rat: 1,23 mg/kg

dermal, LD50, Rat: 1,23 mg/kg

dermal, LD50, Rabbit: 2 mg/kg

oral, NOEL, Rat: 400 mg/kg

oral, NOEL, Mouse: 200

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



Article No.: 1534 Hardener DOWACOAT ETB  
Print date: 14.08.2023 Revision date: 30.06.2023  
Version: 8 Issue date: 30.06.2023

EN  
Page 7 / 14

inhalative (vapours), NOAEC, Rat: 1072 mg/m<sup>3</sup>  
Method: OECD 412

m-Xylylenediamine

Meinten Sie: m-Xylylenediamine

m-xylylenediamine

oral, LD50, Rat: 1200 mg/kg

dermal, LD50, Rabbit: 2000 mg/kg

Method: OECD 402

inhalative (vapours), LC50, Rat: 1,34 mg/L (4 h)

Method: OECD 403

oral, LD50, Rat, female: 980 mg/L

Method: OECD 401

dermal, LC50, Rat: 2000 mg/L (4 h)

Polymer with formaldehyde and benzylamine hydrogenated

Polymer with formaldehyde and benzylamine hydrogenated

oral, LD50, Rat: 368 mg/kg

dermal, LD50, Rabbit: > 2000 mg/kg

4,4'-methylenebis (cyclohexylamine)

oral, LD50, Rat: 380 mg/kg

dermal, LD50, Rat: 2110 mg/kg

Method: OECD 402

dermal, LD50, Rabbit: > 1000 mg/kg

Reactionproduct of 4,4'-Isopropylidenediphenol, 1-chloro-2,3-epoxypropane and m-phenylenebis(methylamine)

oral, LD50, Rat: 1000 mg/kg

Method: OECD 423

dermal, LD50, Rat: 2000 mg/kg

Method: OECD 402

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

Causes severe skin burns and eye damage.

benzyl alcohol

Skin, Rabbit (4 h)

Method: OECD 404

non-irritant.; not corrosive

eyes, Rabbit

Method: OECD 405

Causes serious eye irritation.; not corrosive

m-Xylylenediamine

Meinten Sie: m-Xylylenediamine

m-xylylenediamine

Skin, Rat (4 h)

Directive 67/548/EEC, Annex V, B.4.

eyes, Rabbit (24 h)

Severe eye irritation

Polymer with formaldehyde and benzylamine hydrogenated

Polymer with formaldehyde and benzylamine hydrogenated

Skin (4 h)

No data available

eyes

No data available

4,4'-methylenebis (cyclohexylamine)

Skin, Rabbit (4 h)

Corrosive

eyes, Rabbit (24 h)

Corrosive

Reactionproduct of 4,4'-Isopropylidenediphenol, 1-chloro-2,3-epoxypropane and m-phenylenebis(methylamine)

Skin (4 h)

No data available

eyes

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



Article No.: 1534 Hardener DOWACOAT ETB  
Print date: 14.08.2023 Revision date: 30.06.2023  
Version: 8 Issue date: 30.06.2023

EN  
Page 8 / 14

No data available

**Respiratory or skin sensitisation**

May cause an allergic skin reaction.

benzyl alcohol

Skin, Guinea pig: ; Evaluation not sensitising.

Method: OECD 406

m-Xylylenediamine

Meinten Sie: m-Xylylenediamine

m-xylylenediamine

Skin, Mouse:

Method: OECD 429

in-vivo; May cause sensitization by skin contact.

Respiratory system:

No data available

Polymer with formaldehyde and benzylamine hydrogenated

Polymer with formaldehyde and benzylamine hydrogenated

Skin:

No data available

Respiratory system:

No data available

4,4'-methylenebis (cyclohexylamine)

Skin, Guinea pig:

Method: OECD 406

May cause sensitization by skin contact.; Buhler test

Respiratory system, Guinea pig:

Method: OECD 406

May cause sensitization by skin contact.; Buhler test

Reactionproduct of 4,4'-Isopropylidenediphenol, 1-chloro-2,3-epoxypropane and m-phenylenebis(methylamine)

Skin:

No data available

Respiratory system:

No data available

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

benzyl alcohol

Germ cell mutagenicity; Evaluation negative

Method: OECD 471 (Ames test)

OECD 474

Carcinogenicity

No data available

Reproductive toxicity

No data available

m-Xylylenediamine

Meinten Sie: m-Xylylenediamine

m-xylylenediamine

Germ cell mutagenicity; Evaluation negative

Ames test; S. typhimurium

Carcinogenicity; Evaluation negative

Reproductive toxicity

No data available

Germ cell mutagenicity; Evaluation negative

Ames test S. typhimurium Result: positive; Mouse

Polymer with formaldehyde and benzylamine hydrogenated

Polymer with formaldehyde and benzylamine hydrogenated

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity



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



Article No.: 1534 Hardener DOWACOAT ETB  
Print date: 14.08.2023 Revision date: 30.06.2023  
Version: 8 Issue date: 30.06.2023

EN  
Page 9 / 14

No data available

4,4'-methylenebis (cyclohexylamine)

Germ cell mutagenicity; Evaluation negative

Ames test; S. typhimurium

Carcinogenicity; Evaluation negative

Reproductive toxicity

No data available

Germ cell mutagenicity; Evaluation negative

Ames test S. typhimurium Result: positive; Mouse

Reactionproduct of 4,4'-Isopropylidenediphenol, 1-chloro-2,3-epoxypropane and m-phenylenebis(methylamine)

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

**STOT-single exposure; STOT-repeated exposure**

benzyl alcohol

Specific target organ toxicity (single exposure)

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

Specific target organ toxicity (repeated exposure)

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

Repeated dose toxicity (subacute, subchronic, chronic)

No data available

m-Xylylenediamine

Meinten Sie: m-Xylylenediamine

m-xylylenediamine

Specific target organ toxicity (single exposure)

No data available

Specific target organ toxicity (repeated exposure)

No data available

Polymer with formaldehyde and benzylamine hydrogenated

Polymer with formaldehyde and benzylamine hydrogenated

Specific target organ toxicity (single exposure)

No data available

Specific target organ toxicity (repeated exposure)

No data available

4,4'-methylenebis (cyclohexylamine)

Specific target organ toxicity (single exposure)

No data available

Specific target organ toxicity (repeated exposure) Evaluation May cause damage to organs through prolonged or repeated exposure.

liver; movement disorders

Reactionproduct of 4,4'-Isopropylidenediphenol, 1-chloro-2,3-epoxypropane and m-phenylenebis(methylamine)

Specific target organ toxicity (single exposure)

No data available

Specific target organ toxicity (repeated exposure)

No data available

**Aspiration hazard**

benzyl alcohol

Aspiration hazard

May be harmful if swallowed.; May be harmful if inhaled.; non-irritant.

m-Xylylenediamine

Meinten Sie: m-Xylylenediamine

m-xylylenediamine

Aspiration hazard

No data available

Polymer with formaldehyde and benzylamine hydrogenated

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



Article No.: 1534 Hardener DOWACOAT ETB  
Print date: 14.08.2023 Revision date: 30.06.2023  
Version: 8 Issue date: 30.06.2023

EN  
Page 10 / 14

Polymer with formaldehyde and benzylamine hydrogenated

Aspiration hazard

No data available

4,4'-methylenebis (cyclohexylamine)

Aspiration hazard

No data available

Reactionproduct of 4,4'-Isopropylidenediphenol, 1-chloro-2,3-epoxypropane and m-phenylenebis(methylamine)

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

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

#### 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

benzyl alcohol

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 2,18 mg/L (96 h)

Daphnia toxicity, EC50, Daphnia pulex (water flea): 2,94 mg/L (48 h)

Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 0,11 mg/L (72 h)

Algae, EC50, Algae: 2,6 mg/L (72 h)

Fish toxicity, LC50, Lepomis macrochirus (Bluegill): 10 ppm (96 h)

Algae toxicity, NOEC, Skeletonema costatum: 0,027 mg/L (72 h)

m-Xylylenediamine

Meinten Sie: m-Xylylenediamine

m-xylylenediamine

Fish toxicity, LC50, Oryzias latipes: 87,6 mg/L (96 h)

Method: OECD 203

semistatic

Daphnia toxicity, EC50, Daphnia magna (Big water flea): 15,2 mg/L (48 h)

Method: OECD 202

Static test

Algae toxicity, EC50, Selenastrum capricornutum: 32,1 mg/L (72 h)

Method: OECD 201

Static test

Bacteria toxicity, EC50, Sludge treatment: > 1000 mg/L (30 h)

Method: OECD 209

respiratory inhibition

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): > 100 mg/L (96 h)

Algae toxicity, IC50: 12 mg/L (72 h)

Polymer with formaldehyde and benzylamine hydrogenated

Polymer with formaldehyde and benzylamine hydrogenated

Fish toxicity, LC50, Poecilia reticulata (Guppy): 63 mg/L (96 h)

Method: OECD 203

Daphnia toxicity, EC50, Daphnia magna: 18,6 mg/L (48 h)

Method: OECD 202

Algae toxicity, ErC50, Desmodesmus subspicatus: 43,94 mg/L (72 h)

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



Article No.: 1534 Hardener DOWACOAT ETB  
Print date: 14.08.2023 Revision date: 30.06.2023  
Version: 8 Issue date: 30.06.2023

EN  
Page 11 / 14

4,4'-methylenebis (cyclohexylamine)

Fish toxicity, LC50, Leuciscus idus (golden orfe): 67,8 mg/L (96 h)

DIN 38412

Daphnia toxicity, EC50, Daphnia magna (Big water flea): 9,24 mg/L (48 h)

Static test

Algae toxicity, ErC50, Desmodesmus subspicatus: 170 mg/L 140 - 200 mg/L (72 h)

Static test

Bacteria toxicity, EC50, Pseudomonas putida: 156 mg/L (30 min)

Reactionproduct of 4,4'-Isopropylidenediphenol, 1-chloro-2,3-epoxypropane and m-phenylenebis(methylamine)

Fish toxicity, LC50, Danio rerio (Zebraabärbling): 8,72 mg/L (96 h)

EU EC C.1 Acute Toxicity for Fish

Daphnia toxicity, EC50, Daphnia magna: 1,46 mg/L (48 h)

EU Method C. 2

Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 2,11 mg/L (72 h)

Method: OECD 201

Algae toxicity, NOEC: < 30 mg/L (3 d)

Bacteria toxicity, Activated sludge: 119,5 mg/L (3 h)

EU Method C. 11

Algae toxicity, EC50: > 30 mg/L (72 h)

**Long-term Ecotoxicity**

Harmful to aquatic life with long lasting effects.

**12.2. Persistence and degradability**

benzyl alcohol

Biodegradation: 92 - 96 percent (14 d)

Method: OECD 301C

Readily biodegradable (according to OECD criteria)

m-Xylylenediamine

Meinten Sie: m-Xylylenediamine

m-xylylenediamine

Biodegradation: 49 percent (28 d); Evaluation Not readily biodegradable (according to OECD criteria)

Method: OECD 301B

aerobic

Polymer with formaldehyde and benzylamine hydrogenated

Polymer with formaldehyde and benzylamine hydrogenated

Biodegradation:

There is no indication of biodegradation, so the substance is not considered to be rapidly degradable.

4,4'-methylenebis (cyclohexylamine)

Biodegradation: < 10 percent (28 d); Evaluation Not readily biodegradable (according to OECD criteria)

aerobic

Reactionproduct of 4,4'-Isopropylidenediphenol, 1-chloro-2,3-epoxypropane and m-phenylenebis(methylamine)

Biodegradation: < 0,0001 percent (28 d); Evaluation Not readily biodegradable (according to OECD criteria)

Method: OECD 301F

**12.3. Bioaccumulative potential**

benzyl alcohol

Distribution coefficient n-octanol/water (log KOW): 1,05

Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.

m-Xylylenediamine

Meinten Sie: m-Xylylenediamine

m-xylylenediamine

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

No significant bioaccumulation.

Polymer with formaldehyde and benzylamine hydrogenated

Polymer with formaldehyde and benzylamine hydrogenated

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

No data available

4,4'-methylenebis (cyclohexylamine)

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

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



Article No.: 1534  
Print date: 14.08.2023  
Version: 8

Hardener DOWACOAT ETB  
Revision date: 30.06.2023  
Issue date: 30.06.2023

EN  
Page 12 / 14

No data available

Reactionproduct of 4,4'-Isopropylidenediphenol, 1-chloro-2,3-epoxypropane and m-phenylenebis(methylamine)

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

No data available

**Bioconcentration factor (BCF)**

benzyl alcohol

Bioconcentration factor (BCF), fish: 1,37

**12.4. Mobility in soil**

benzyl alcohol

soil:

No further relevant information available.

m-Xylylenediamine

Meinten Sie: m-Xylylenediamine

m-xylylenediamine

soil:

No data available

Polymer with formaldehyde and benzylamine hydrogenated

Polymer with formaldehyde and benzylamine hydrogenated

No data available:

No data available

4,4'-methylenebis (cyclohexylamine)

soil:

Probably mobile in the environment due to its water solubility.

Reactionproduct of 4,4'-Isopropylidenediphenol, 1-chloro-2,3-epoxypropane and m-phenylenebis(methylamine)

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 2735

**14.2. UN proper shipping name**

Land transport (ADR/RID):

Amines, liquid, corrosive, n.o.s.

((1,3-Bis(aminomethyl)benzol)

Sea transport (IMDG):

AMINES, LIQUID, CORROSIVE, N.O.S.

((1,3-Bis(aminomethyl)benzol)

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

Amines, liquid, corrosive, n.o.s.

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



Article No.: 1534  
 Print date: 14.08.2023  
 Version: 8

Hardener DOWACOAT ETB  
 Revision date: 30.06.2023  
 Issue date: 30.06.2023

EN  
 Page 13 / 14

((1,3-Bis(aminomethyl)benzol)

**14.3. Transport hazard class(es)**

8

**14.4. Packing group**

III

**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 E

**Sea transport (IMDG)**

EmS-No. F-A, S-B

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

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): 359

**National regulations**

**Restrictions of occupation**

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

**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.
202-859-9 100-51-6	benzyl alcohol	01-2119492630-38
216-032-5 1477-55-0	m-Xylylenediamine Meinten Sie: m-Xylylenediamine m-xylylenediamine	01-2119480150-50
500-302-7 113930-69-1	Reactionproduct of 4,4'-Isopropylidenediphenol, 1-chloro-2,3-epoxypropane and m-phenylenebis(methylamine)	01-2119965162-39
217-168-8 1761-71-3	4,4'-methylenebis (cyclohexylamine)	01-2119541673-38

**SECTION 16: Other information**

**Full text of classification in section 3**

Acute Tox. 4 / H332	Acute toxicity (inhalative)	Harmful if inhaled.
Acute Tox. 4 / H302	Acute toxicity (oral)	Harmful if swallowed.
Acute Tox. 3 / H331	Acute toxicity (inhalative)	Toxic if inhaled.
Skin Corr. 1B / H314	Skin corrosion/irritation	Causes severe skin burns and eye damage.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Aquatic Chronic 3 / H412	Hazardous to the aquatic environment	Harmful to aquatic life with long lasting effects.
Acute Tox. 3 / H301	Acute toxicity (oral)	Toxic if swallowed.
Skin Corr. 1C / H314	Skin corrosion/irritation	Causes severe skin burns and eye damage.
Eye Dam. 1 / H318	Serious eye damage/eye irritation	Causes serious eye damage.

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



Article No.: 1534  
Print date: 14.08.2023  
Version: 8

Hardener DOWACOAT ETB  
Revision date: 30.06.2023  
Issue date: 30.06.2023

EN  
Page 14 / 14

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).
Skin Sens. 1B / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.

**Classification procedure**

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

Acute Tox. 4	Acute toxicity (oral)	Calculation method.
Skin Corr. 1B	Skin corrosion/irritation	Calculation method.
Eye Dam. 1	Serious eye damage/eye irritation	Calculation method.
Skin Sens. 1	Respiratory or skin sensitisation	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.