# Safety Data Sheet according to (EC) No 1907/2006 as amended



SDS No. : 173484
V009.0

LOCTITE EA 3474 Part B

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

**1.1. Product identifier**
LOCTITE EA 3474 Part B

**1.2. Relevant identified uses of the substance or mixture and uses advised against**
Intended use:
Epoxy Hardener

**1.3. Details of the supplier of the safety data sheet**
Henkel AG & Co. KGaA
Henkelstr. 67
40589 Düsseldorf

Germany

Phone: +49 211 797 0

SDSinfo.Adhesive@henkel.com
For Safety Data Sheet updates please visit our website https://mysds.henkel.com/index.html#/appSelection or www.henkel-adhesives.com.

**1.4. Emergency telephone number**
The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

## SECTION 2: Hazards identification

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

**Classification (CLP):**

| | |
|---|---|
| Skin corrosion | Sub-category 1B |
| H314 Causes severe skin burns and eye damage. | |
| Serious eye damage | Category 1 |
| H318 Causes serious eye damage. | |
| Skin sensitizer | Category 1 |
| H317 May cause an allergic skin reaction. | |
| Chronic hazards to the aquatic environment | Category 3 |
| H412 Harmful to aquatic life with long lasting effects. | |

**2.2. Label elements**

**Label elements (CLP):**

**Hazard pictogram:**

**Contains** Isophorone diamine

Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine

Formaldehyde, polymer with benzenamine, hydrogenated
N-(3-(Trimethoxysilyl)propyl)ethylenediamine

3,6-diazaoctanethylenediamine

4,4'-Methylenebis(cyclohexylamine)

**Signal word:** Danger

**Hazard statement:**
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 statement: Prevention**
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.

**Precautionary statement: Response**
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.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

### 2.3. Other hazards

None if used properly.

**Following substances are present in a concentration ≥ the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):**

This mixture does not contain any substances in a concentration ≥ the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

**Declaration of the ingredients according to CLP (EC) No 1272/2008:**

| Hazardous components<br>CAS-No.<br>EC Number<br>REACH-Reg No. | Concentration | Classification | Specific Conc. Limits, M-factors and ATEs | Add. Information |
|---|---|---|---|---|
| Isophorone diamine<br>2855-13-2<br>220-666-8<br>01-2119514687-32 | 5- < 10 % | Skin Sens. 1A, H317<br>Eye Dam. 1, H318<br>Skin Corr. 1B, H314<br>Acute Tox. 4, Oral, H302 | Skin Sens. 1A; H317; C >= 0,001 %<br>=====<br>oral:ATE = 1.030 mg/kg<br>inhalation:ATE = 5,011 mg/l; | |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine<br>68082-29-1 | 3- < 5 % | Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317<br>Aquatic Chronic 2, H411 | | |
| benzyl alcohol<br>100-51-6<br>202-859-9<br>01-2119492630-38 | 2,5- < 5 % | Acute Tox. 4, Oral, H302<br>Acute Tox. 4, Inhalation, H332<br>Eye Irrit. 2, H319 | dermal:ATE = 2.500 mg/kg<br>inhalation:ATE = 4,17 mg/l;dust/mist | |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2<br>603-894-6<br>01-2119983522-33 | 1- < 2,5 % | Acute Tox. 3, Oral, H301<br>Skin Corr. 1C, H314<br>STOT RE 2, H373<br>Aquatic Chronic 3, H412<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317 | dermal:ATE = > 2.000 mg/kg | |
| 1,5-Pentanediamine, 2-methyl-<br>15520-10-2<br>239-556-6<br>01-2119976310-41 | 1- < 2,5 % | Acute Tox. 4, Oral, H302<br>Acute Tox. 4, Dermal, H312<br>Acute Tox. 4, Inhalation, H332<br>Eye Dam. 1, H318<br>Skin Corr. 1A, H314<br>STOT SE 3, H335 | inhalation:ATE = 1,225 mg/l;dust/mist | |
| Salicylic acid<br>69-72-7<br>200-712-3<br>01-2119486984-17 | 1- < 2,5 % | Repr. 2, H361d<br>Acute Tox. 4, Oral, H302<br>Eye Dam. 1, H318 | | |
| 2,4,6-tris(dimethylaminomethyl)phenol<br>90-72-2<br>202-013-9<br>01-2119560597-27 | 1- < 2,5 % | Acute Tox. 4, Oral, H302<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319 | | |
| N-(3-(Trimethoxysilyl)propyl)ethylene diamine<br>1760-24-3<br>217-164-6<br>01-2119970215-39 | 0,1- < 1 % | Skin Sens. 1A, H317<br>Eye Dam. 1, H318<br>Acute Tox. 4, Inhalation, H332<br>STOT RE 2, Inhalation, H373 | inhalation:ATE = 1,49 mg/l;dust/mist | |
| 3,6-diazaoctanethylenediamine<br>112-24-3<br>203-950-6<br>01-2119487919-13 | 0,25- < 1 % | Acute Tox. 4, Oral, H302<br>Acute Tox. 4, Dermal, H312<br>Skin Sens. 1, H317<br>Skin Corr. 1B, H314<br>Aquatic Chronic 3, H412 | | |
| 4,4'-Methylenebis(cyclohexylamine)<br>1761-71-3<br>217-168-8<br>01-2119541673-38<br>01-2119979542-27 | 0,1- < 1 % | Acute Tox. 4, Oral, H302<br>Skin Corr. 1B, H314<br>Skin Sens. 1, H317<br>STOT RE 2, Oral, H373<br>Eye Dam. 1, H318 | | |

**If no ATE values are displayed, please refer to LD/LC50 values in Section 11.**
**For full text of the H - statements and other abbreviations see section 16 "Other information".**

## SECTION 4: First aid measures

**4.1. Description of first aid measures**

Inhalation:
Move to fresh air. If symptoms persist, seek medical advice.

Skin contact:
Rinse with running water and soap.
Obtain medical attention if irritation persists.

Eye contact:
Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

Ingestion:
Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

SKIN: Rash, Urticaria.

**4.3. Indication of any immediate medical attention and special treatment needed**
See section: Description of first aid measures

## SECTION 5: Firefighting measures

**5.1. Extinguishing media**
**Suitable extinguishing media:**
water, carbon dioxide, foam, powder

**Extinguishing media which must not be used for safety reasons:**
High pressure waterjet

**5.2. Special hazards arising from the substance or mixture**
In the event of a fire, carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx) can be released.

**5.3. Advice for firefighters**
Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

**Additional information:**
In case of fire, keep containers cool with water spray.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**
Avoid contact with skin and eyes.
Wear protective equipment.
Ensure adequate ventilation.
Keep away from sources of ignition.
Avoid dust formation.

**6.2. Environmental precautions**
Do not empty into drains / surface water / ground water.

**6.3. Methods and material for containment and cleaning up**
Dispose of contaminated material as waste according to Section 13.
Scrape up as much material as possible.
Sweep up spilled material. Avoid creating dust.
Store in a partly filled, closed container until disposal.

**6.4. Reference to other sections**
See advice in section 8

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**
Avoid skin and eye contact.
See advice in section 8

Hygiene measures:
Wash hands before work breaks and after finishing work.
Do not eat, drink or smoke while working.
Good industrial hygiene practices should be observed.

**7.2. Conditions for safe storage, including any incompatibilities**
Store in sealed original container.
Store in a cool, well-ventilated place.
Refer to Technical Data Sheet

**7.3. Specific end use(s)**
Epoxy Hardener

## SECTION 8: Exposure controls/personal protection

**8.1. Control parameters**

**Occupational Exposure Limits**

Valid for
Germany

| Ingredient [Regulated substance] | ppm | mg/m$^3$ | Value type | Short term exposure limit category / Remarks | Regulatory list |
|---|---|---|---|---|---|
| Benzyl alcohol<br>100-51-6 | | | Short Term Exposure Classification: | Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages. | TRGS 900 |
| Benzyl alcohol<br>100-51-6 | 5 | 22 | Exposure limit(s): | 2<br>If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7). | TRGS 900 |
| Benzyl alcohol<br>100-51-6 | | | Skin designation: | Can be absorbed through the skin. | TRGS 900 |

**Predicted No-Effect Concentration (PNEC):**

| Name on list | Environmental Compartment | Exposure period | Value | | | | Remarks |
|---|---|---|---|---|---|---|---|
| | | | mg/l | ppm | mg/kg | others | |
| 3-Aminomethyl-3,5,5-trimethylcyclohexylamine 2855-13-2 | aqua (freshwater) | | 0,06 mg/l | | | | |
| 3-Aminomethyl-3,5,5-trimethylcyclohexylamine 2855-13-2 | aqua (marine water) | | 0,006 mg/l | | | | |
| 3-Aminomethyl-3,5,5-trimethylcyclohexylamine 2855-13-2 | aqua (intermittent releases) | | 0,23 mg/l | | | | |
| 3-Aminomethyl-3,5,5-trimethylcyclohexylamine 2855-13-2 | sediment (freshwater) | | | | 5,784 mg/kg | | |
| 3-Aminomethyl-3,5,5-trimethylcyclohexylamine 2855-13-2 | sediment (marine water) | | | | 0,578 mg/kg | | |
| 3-Aminomethyl-3,5,5-trimethylcyclohexylamine 2855-13-2 | Soil | | | | 1,121 mg/kg | | |
| 3-Aminomethyl-3,5,5-trimethylcyclohexylamine 2855-13-2 | sewage treatment plant (STP) | | 3,18 mg/l | | | | |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | aqua (freshwater) | | 0,00434 mg/l | | | | |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | aqua (marine water) | | 0,00043 mg/l | | | | |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | aqua (intermittent releases) | | 0,0434 mg/l | | | | |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | sewage treatment plant (STP) | | 3,84 mg/l | | | | |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | sediment (freshwater) | | | | 434,02 mg/kg | | |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | sediment (marine water) | | | | 43,4 mg/kg | | |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | Soil | | | | 86,78 mg/kg | | |
| Benzyl alcohol 100-51-6 | Soil | | | | 0,456 mg/kg | | |
| Benzyl alcohol 100-51-6 | sewage treatment plant (STP) | | 39 mg/l | | | | |
| Benzyl alcohol 100-51-6 | sediment (freshwater) | | | | 5,27 mg/kg | | |
| Benzyl alcohol 100-51-6 | sediment (marine water) | | | | 0,527 mg/kg | | |
| Benzyl alcohol 100-51-6 | aqua (marine water) | | 0,1 mg/l | | | | |
| Benzyl alcohol 100-51-6 | aqua (intermittent releases) | | 2,3 mg/l | | | | |
| Benzyl alcohol 100-51-6 | aqua (freshwater) | | 1 mg/l | | | | |
| Benzyl alcohol 100-51-6 | Predator | | | | | | no potential for bioaccumulation |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | aqua (freshwater) | | 0,015 mg/l | | | | |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | aqua (marine water) | | 0,002 mg/l | | | | |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | aqua (intermittent releases) | | 0,15 mg/l | | | | |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | sewage treatment plant (STP) | | 1,9 mg/l | | | | |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | sediment (freshwater) | | | | 15 mg/kg | | |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | sediment (marine water) | | | | 1,5 mg/kg | | |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | Soil | | | | 1,8 mg/kg | | |
| 2-Methylpentane-1,5-diamine<br>15520-10-2 | aqua (freshwater) | | 0,42 mg/l | | | | |
| 2-Methylpentane-1,5-diamine<br>15520-10-2 | aqua (marine water) | | 0,042 mg/l | | | | |
| 2-Methylpentane-1,5-diamine<br>15520-10-2 | sewage treatment plant (STP) | | 1250 mg/l | | | | |
| 2-Methylpentane-1,5-diamine<br>15520-10-2 | sediment (freshwater) | | | | 7,58 mg/kg | | |
| 2-Methylpentane-1,5-diamine<br>15520-10-2 | sediment (marine water) | | | | 0,758 mg/kg | | |
| 2-Methylpentane-1,5-diamine<br>15520-10-2 | Soil | | | | 1,27 mg/kg | | |
| 2-Methylpentane-1,5-diamine<br>15520-10-2 | aqua (intermittent releases) | | 0,42 mg/l | | | | |
| Salicylic acid<br>69-72-7 | aqua (freshwater) | | 0,2 mg/l | | | | |
| Salicylic acid<br>69-72-7 | aqua (marine water) | | 0,02 mg/l | | | | |
| Salicylic acid<br>69-72-7 | aqua (intermittent releases) | | 1 mg/l | | | | |
| Salicylic acid<br>69-72-7 | sewage treatment plant (STP) | | 162 mg/l | | | | |
| Salicylic acid<br>69-72-7 | sediment (freshwater) | | | | 1,42 mg/kg | | |
| Salicylic acid<br>69-72-7 | sediment (marine water) | | | | 0,142 mg/kg | | |
| Salicylic acid<br>69-72-7 | Soil | | | | 0,166 mg/kg | | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | aqua (freshwater) | | 0,046 mg/l | | | | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | aqua (marine water) | | 0,005 mg/l | | | | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | Freshwater - intermittent | | 0,46 mg/l | | | | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | Marine water - intermittent | | 0,046 mg/l | | | | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | sewage treatment plant (STP) | | 0,2 mg/l | | | | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | sediment (freshwater) | | | | 0,262 mg/kg | | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | sediment (marine water) | | | | 0,026 mg/kg | | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | Soil | | | | 0,025 mg/kg | | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine<br>1760-24-3 | aqua (freshwater) | | 0,05 mg/l | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | aqua (marine water) | | 0,005 mg/l | | | | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | Freshwater - intermittent | | 0,072 mg/l | | | | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | sediment (freshwater) | | | | 0,181 mg/kg | | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | sediment (marine water) | | | | 0,018 mg/kg | | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | Soil | | | | 0,007 mg/kg | | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | sewage treatment plant (STP) | | 20 mg/l | | | | |
| 3,6-diazaoctanethylenediamine 112-24-3 | aqua (freshwater) | | 0,027 mg/l | | | | |
| 3,6-diazaoctanethylenediamine 112-24-3 | aqua (marine water) | | 0,003 mg/l | | | | |
| 3,6-diazaoctanethylenediamine 112-24-3 | Sewage treatment plant | | 0,13 mg/l | | | | |
| 3,6-diazaoctanethylenediamine 112-24-3 | sediment (freshwater) | | | | 8,572 mg/kg | | |
| 3,6-diazaoctanethylenediamine 112-24-3 | sediment (marine water) | | | | 0,857 mg/kg | | |
| 3,6-diazaoctanethylenediamine 112-24-3 | Soil | | | | 1,25 mg/kg | | |
| 3,6-diazaoctanethylenediamine 112-24-3 | Freshwater - intermittent | | 0,2 mg/l | | | | |
| 3,6-diazaoctanethylenediamine 112-24-3 | Marine water - intermittent | | 0,02 mg/l | | | | |
| 4,4'-Methylenebis(cyclohexylamine) 1761-71-3 | aqua (intermittent releases) | | 0,08 mg/l | | | | |
| 4,4'-Methylenebis(cyclohexylamine) 1761-71-3 | sediment (freshwater) | | | | 136,6 mg/kg | | |
| 4,4'-Methylenebis(cyclohexylamine) 1761-71-3 | aqua (marine water) | | 0,008 mg/l | | | | |
| 4,4'-Methylenebis(cyclohexylamine) 1761-71-3 | sediment (marine water) | | | | 13,7 mg/kg | | |
| 4,4'-Methylenebis(cyclohexylamine) 1761-71-3 | sewage treatment plant (STP) | | 3,2 mg/l | | | | |
| 4,4'-Methylenebis(cyclohexylamine) 1761-71-3 | Soil | | | | 27,3 mg/kg | | |
| 4,4'-Methylenebis(cyclohexylamine) 1761-71-3 | aqua (freshwater) | | 0,08 mg/l | | | | |

**Derived No-Effect Level (DNEL):**

| Name on list | Application Area | Route of Exposure | Health Effect | Exposure Time | Value | Remarks |
|---|---|---|---|---|---|---|
| 3-Aminomethyl-3,5,5-trimethylcyclohexylamine 2855-13-2 | Workers | inhalation | Long term exposure - local effects | | 0,073 mg/m3 | |
| 3-Aminomethyl-3,5,5-trimethylcyclohexylamine 2855-13-2 | Workers | inhalation | Acute/short term exposure - local effects | | 0,073 mg/m3 | |
| 3-Aminomethyl-3,5,5-trimethylcyclohexylamine 2855-13-2 | General population | oral | Long term exposure - systemic effects | | 0,526 mg/kg | |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | Workers | inhalation | Long term exposure - systemic effects | | 3,9 mg/m3 | |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | Workers | dermal | Long term exposure - systemic effects | | 1,1 mg/kg | |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | General population | inhalation | Long term exposure - systemic effects | | 0,97 mg/m3 | |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | General population | dermal | Long term exposure - systemic effects | | 0,56 mg/kg | |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | General population | oral | Long term exposure - systemic effects | | 0,56 mg/kg | |
| Benzyl alcohol 100-51-6 | General population | oral | Acute/short term exposure - systemic effects | | 20 mg/kg | no potential for bioaccumulation |
| Benzyl alcohol 100-51-6 | General population | oral | Long term exposure - systemic effects | | 4 mg/kg | no potential for bioaccumulation |
| Benzyl alcohol 100-51-6 | Workers | inhalation | Acute/short term exposure - systemic effects | | 110 mg/m3 | no potential for bioaccumulation |
| Benzyl alcohol 100-51-6 | Workers | inhalation | Long term exposure - systemic effects | | 22 mg/m3 | no potential for bioaccumulation |
| Benzyl alcohol 100-51-6 | General population | inhalation | Acute/short term exposure - systemic effects | | 27 mg/m3 | no potential for bioaccumulation |
| Benzyl alcohol 100-51-6 | General population | inhalation | Long term exposure - systemic effects | | 5,4 mg/m3 | no potential for bioaccumulation |
| Benzyl alcohol 100-51-6 | Workers | dermal | Acute/short term exposure - systemic effects | | 40 mg/kg | no potential for bioaccumulation |
| Benzyl alcohol 100-51-6 | Workers | dermal | Long term exposure - systemic effects | | 8 mg/kg | no potential for bioaccumulation |
| Benzyl alcohol 100-51-6 | General population | dermal | Acute/short term exposure - systemic effects | | 20 mg/kg | no potential for bioaccumulation |
| Benzyl alcohol 100-51-6 | General population | dermal | Long term exposure - systemic effects | | 4 mg/kg | no potential for bioaccumulation |
| Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2 | Workers | inhalation | Long term exposure - systemic effects | | 0,2 mg/m3 | |
| Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2 | Workers | inhalation | Acute/short term exposure - systemic effects | | 2 mg/m3 | |
| Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2 | Workers | dermal | Long term exposure - systemic effects | | 2 mg/kg | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | Workers | dermal | Acute/short term exposure - systemic effects | | 6 mg/kg | |
| 2-Methylpentane-1,5-diamine<br>15520-10-2 | Workers | inhalation | Long term exposure - local effects | | 0,25 mg/m3 | |
| 2-Methylpentane-1,5-diamine<br>15520-10-2 | Workers | inhalation | Acute/short term exposure - local effects | | 0,5 mg/m3 | |
| 2-Methylpentane-1,5-diamine<br>15520-10-2 | Workers | dermal | Long term exposure - systemic effects | | 1,5 mg/kg | |
| 2-Methylpentane-1,5-diamine<br>15520-10-2 | General population | inhalation | Long term exposure - local effects | | 0,125 mg/m3 | |
| 2-Methylpentane-1,5-diamine<br>15520-10-2 | General population | inhalation | Acute/short term exposure - local effects | | 0,25 mg/m3 | |
| 2-Methylpentane-1,5-diamine<br>15520-10-2 | General population | dermal | Long term exposure - systemic effects | | 0,75 mg/kg | |
| 2-Methylpentane-1,5-diamine<br>15520-10-2 | General population | oral | Long term exposure - systemic effects | | 0,75 mg/kg | |
| Salicylic acid<br>69-72-7 | Workers | dermal | Long term exposure - systemic effects | | 2,3 mg/kg | |
| Salicylic acid<br>69-72-7 | Workers | inhalation | Long term exposure - systemic effects | | 5 mg/m3 | |
| Salicylic acid<br>69-72-7 | General population | oral | Acute/short term exposure - systemic effects | | 4 mg/kg | |
| Salicylic acid<br>69-72-7 | General population | dermal | Long term exposure - systemic effects | | 1 mg/kg | |
| Salicylic acid<br>69-72-7 | General population | inhalation | Long term exposure - systemic effects | | 4 mg/m3 | |
| Salicylic acid<br>69-72-7 | General population | oral | Long term exposure - systemic effects | | 1 mg/kg | |
| Salicylic acid<br>69-72-7 | Workers | inhalation | Long term exposure - local effects | | 5 mg/m3 | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | Workers | inhalation | Long term exposure - systemic effects | | 0,53 mg/m3 | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | Workers | inhalation | Acute/short term exposure - systemic effects | | 2,1 mg/m3 | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | Workers | dermal | Long term exposure - systemic effects | | 0,15 mg/kg | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | Workers | dermal | Acute/short term exposure - systemic effects | | 0,6 mg/kg | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | General population | inhalation | Long term exposure - systemic effects | | 0,13 mg/m3 | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | General population | inhalation | Acute/short term exposure - systemic effects | | 0,13 mg/m3 | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | General population | dermal | Long term exposure - systemic effects | | 0,075 mg/kg | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | General population | dermal | Acute/short term exposure - systemic effects | | 0,075 mg/kg | |
| 2,4,6-Tris(dimethylaminomethyl)phenol<br>90-72-2 | General population | oral | Long term exposure - systemic effects | | 0,075 mg/kg | |
| N-(3- | Workers | inhalation | Long term | | 130 mg/m3 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| (Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | | | exposure - systemic effects | | | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | Workers | inhalation | Acute/short term exposure - local effects | | 5,36 mg/m3 | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | General population | inhalation | Long term exposure - systemic effects | | 26 mg/m3 | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | General population | oral | Long term exposure - systemic effects | | 4 mg/kg | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | General population | inhalation | Acute/short term exposure - local effects | | 4 mg/m3 | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | Workers | inhalation | Long term exposure - local effects | | 0,6 mg/m3 | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | General population | inhalation | Long term exposure - local effects | | 0,1 mg/m3 | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | General population | inhalation | Acute/short term exposure - systemic effects | | 26400 mg/m3 | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | Workers | dermal | Long term exposure - local effects | | | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | Workers | dermal | Acute/short term exposure - local effects | | | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | General population | dermal | Long term exposure - local effects | | | |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | General population | dermal | Acute/short term exposure - local effects | | | |
| 3,6-diazaoctanethylenediamine 112-24-3 | Workers | inhalation | Long term exposure - systemic effects | | 0,54 mg/m3 | |
| 3,6-diazaoctanethylenediamine 112-24-3 | General population | inhalation | Long term exposure - systemic effects | | 0,096 mg/m3 | |
| 3,6-diazaoctanethylenediamine 112-24-3 | General population | oral | Long term exposure - systemic effects | | 0,14 mg/kg | |
| 4,4'-Methylenebis(cyclohexylamine) 1761-71-3 | Workers | inhalation | Long term exposure - systemic effects | | 0,13 mg/m3 | |
| 4,4'-Methylenebis(cyclohexylamine) 1761-71-3 | Workers | dermal | Long term exposure - systemic effects | | 0,053 mg/kg | |
| 4,4'-Methylenebis(cyclohexylamine) 1761-71-3 | Workers | inhalation | Long term exposure - local effects | | | |
| 4,4'-Methylenebis(cyclohexylamine) 1761-71-3 | Workers | inhalation | Acute/short term exposure - local effects | | | |
| 4,4'-Methylenebis(cyclohexylamine) 1761-71-3 | Workers | dermal | Long term exposure - local effects | | | |
| 4,4'-Methylenebis(cyclohexylamine) 1761-71-3 | Workers | dermal | Long term exposure - local effects | | | |

**Biological Exposure Indices:**
None

**8.2. Exposure controls:**

Engineering controls:
Ensure good ventilation/extraction.

Respiratory protection:
Ensure adequate ventilation.
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area
Filter type: A (EN 14387)

Hand protection:
Chemical-resistant protective gloves (EN 374).
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:
Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.
Protective eye equipment should conform to EN166.

Skin protection:
Wear suitable protective clothing.
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:
The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.
Personal protective equipment should conform to the relevant EN standard.

## SECTION 9: Physical and chemical properties

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

| | |
|---|---|
| Delivery form | paste |
| Colour | grey |
| Odor | amine-like |
| Physical state | solid |
| Solidification temperature | Not applicable, Product is a solid. |
| Initial boiling point | > 200 °C (> 392 °F) |
| Flammability | The product is not flammable. |
| Explosive limits | Not applicable, Product is a solid. |
| Flash point | > 101 °C (> 213.8 °F) |
| Auto-ignition temperature | Not applicable, Product is a solid. |
| Decomposition temperature | Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use |
| pH<br>(20 °C (68 °F); Conc.: 100 %) | 9 - 12 |
| Viscosity (kinematic) | Not applicable, Product is a solid. |
| Solubility (qualitative)<br>(20 °C (68 °F); Solvent: Water) | Insoluble |
| Partition coefficient: n-octanol/water | Not applicable<br>Mixture |
| Vapour pressure<br>(20 °C (68 °F)) | 0,02 hPa |
| Density<br>(20 °C (68 °F)) | 2,1 g/cm3 None |
| Relative vapour density: | Not applicable, Product is a solid. |
| Particle characteristics | Not applicable, mixture is a paste. |

**9.2. Other information**

Other information not applicable for this product

## SECTION 10: Stability and reactivity

**10.1. Reactivity**
Reacts with strong oxidants.
Acids.
Reaction with strong acids.
Strong bases.

**10.2. Chemical stability**
Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**
See section reactivity

**10.4. Conditions to avoid**
Stable under normal conditions of storage and use.

**10.5. Incompatible materials**
See section reactivity.

**10.6. Hazardous decomposition products**
carbon oxides.
Rapid polymerisation may generate excessive heat and pressure.
May produce fumes when heated to decomposition. Fumes may contain carbon monoxide and other toxic fumes.

## SECTION 11: Toxicological information

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

**Acute oral toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Species | Method |
|---|---|---|---|---|
| Isophorone diamine<br>2855-13-2 | Acute toxicity estimate (ATE) | 1.030 mg/kg | | Expert judgement |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine<br>68082-29-1 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 423 (Acute Oral toxicity) |
| benzyl alcohol<br>100-51-6 | LD50 | 1.620 mg/kg | rat | not specified |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | LD50 | 300 mg/kg | rat | OECD Guideline 423 (Acute Oral toxicity) |
| 1,5-Pentanediamine, 2-methyl-<br>15520-10-2 | LD50 | 1.170 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| Salicylic acid<br>69-72-7 | LD50 | 891 mg/kg | rat | equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity) |
| 2,4,6-tris(dimethylaminomethyl)phenol<br>90-72-2 | LD50 | 1.200 mg/kg | rat | not specified |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine<br>1760-24-3 | LD50 | 2.295 mg/kg | rat | EPA OPPTS 870.1100 (Acute Oral Toxicity) |
| 3,6-diazaoctanethylenediamine<br>112-24-3 | LD50 | 1.591 mg/kg | rat | OECD Guideline 401 (Acute Oral Toxicity) |
| 4,4'-Methylenebis(cyclohexylamine)<br>1761-71-3 | LD50 | 380 mg/kg | rat | EPA OPP 81-1 (Acute Oral Toxicity) |

**Acute dermal toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Species | Method |
|---|---|---|---|---|
| Isophorone diamine<br>2855-13-2 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine<br>68082-29-1 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |
| benzyl alcohol<br>100-51-6 | Acute toxicity estimate (ATE) | 2.500 mg/kg | | Expert judgement |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | Acute toxicity estimate (ATE) | > 2.000 mg/kg | rabbit | Expert judgement |
| 1,5-Pentanediamine, 2-methyl-<br>15520-10-2 | LD50 | 1.870 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |
| Salicylic acid<br>69-72-7 | LD50 | > 2.000 mg/kg | rat | OECD Guideline 402 (Acute Dermal Toxicity) |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine<br>1760-24-3 | LD50 | > 2.000 mg/kg | rat | EPA OPPTS 870.1200 (Acute Dermal Toxicity) |
| 3,6-diazaoctanethylenediamine<br>112-24-3 | LD50 | 1.465 mg/kg | rabbit | OECD Guideline 402 (Acute Dermal Toxicity) |
| 4,4'-Methylenebis(cyclohexylamine)<br>1761-71-3 | LD50 | 2.110 mg/kg | rabbit | not specified |

**Acute inhalative toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Test atmosphere | Exposure time | Species | Method |
|---|---|---|---|---|---|---|
| Isophorone diamine 2855-13-2 | LC50 | > 5,01 mg/l | dust/mist | 4 h | rat | OECD Guideline 403 (Acute Inhalation Toxicity) |
| Isophorone diamine 2855-13-2 | Acute toxicity estimate (ATE) | 5,011 mg/l | | | | Expert judgement |
| benzyl alcohol 100-51-6 | Acute toxicity estimate (ATE) | 4,17 mg/l | dust/mist | | | Expert judgement |
| benzyl alcohol 100-51-6 | LC50 | > 4,178 mg/l | dust/mist | 4 h | rat | OECD Guideline 403 (Acute Inhalation Toxicity) |
| 1,5-Pentanediamine, 2-methyl- 15520-10-2 | Acute toxicity estimate (ATE) | 1,225 mg/l | dust/mist | 4 h | | Expert judgement |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | LC50 | 1,49 - 2,44 mg/l | dust/mist | 4 h | rat | EPA OPPTS 870.1300 (Acute inhalation toxicity) |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | Acute toxicity estimate (ATE) | 1,49 mg/l | dust/mist | | | Expert judgement |

**Skin corrosion/irritation:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Exposure time | Species | Method |
|---|---|---|---|---|
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | irritating or corrosive | | Human, EpiDermTM SIT (EPI-200), Reconstructed Human Epidermis (RHE) | OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method) |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | not corrosive | | Human, in vitro skin model | OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method) |
| benzyl alcohol 100-51-6 | not irritating | 4 h | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2 | Category 1C (corrosive) | | Corrositex Biobarrier Membrane (reconstituted collagen matrix) | OECD Guideline 435 (In Vitro Membrane Barrier Test Method for Skin Corrosion) |
| 1,5-Pentanediamine, 2-methyl- 15520-10-2 | highly corrosive | 3 min | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| Salicylic acid 69-72-7 | slightly irritating | | rabbit | not specified |
| 2,4,6-tris(dimethylaminomethyl)phenol 90-72-2 | corrosive | 4 h | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| 2,4,6-tris(dimethylaminomethyl)phenol 90-72-2 | Sub-Category 1C (corrosive) | | Corrositex Biobarrier Membrane (reconstituted collagen matrix) | OECD Guideline 435 (In Vitro Membrane Barrier Test Method for Skin Corrosion) |
| N-(3- | mildly | 4 h | rabbit | EPA OPPTS 870.2500 (Acute Dermal Irritation) |

| | | | | |
|---|---|---|---|---|
| (Trimethoxysilyl)propyl)ethylenediamine<br>1760-24-3 | irritating | | | |
| 3,6-diazaoctanethylenediamine<br>112-24-3 | corrosive | | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |
| 4,4'-Methylenebis(cyclohexylamine)<br>1761-71-3 | corrosive | 2,75 h | rabbit | OECD Guideline 404 (Acute Dermal Irritation / Corrosion) |

**Serious eye damage/irritation:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| **Hazardous substances<br>CAS-No.** | **Result** | **Exposure time** | **Species** | **Method** |
|---|---|---|---|---|
| Isophorone diamine<br>2855-13-2 | corrosive | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine<br>68082-29-1 | Category 1 (irreversible effects on the eye) | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| benzyl alcohol<br>100-51-6 | irritating | 24 h | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| Salicylic acid<br>69-72-7 | highly irritating | | rabbit | Draize Test |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine<br>1760-24-3 | highly irritating | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |
| 4,4'-Methylenebis(cyclohexylamine)<br>1761-71-3 | Category 1 (irreversible effects on the eye) | | rabbit | not specified |

**Respiratory or skin sensitization:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Result | Test type | Species | Method |
|---|---|---|---|---|
| Isophorone diamine<br>2855-13-2 | sensitising | Guinea pig maximisation test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine<br>68082-29-1 | sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine<br>68082-29-1 | sensitising | Guinea pig maximisation test | guinea pig | equivalent or similar to OECD Guideline 406 (Skin Sensitisation) |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | sensitising | Buehler test | guinea pig | Buehler test |
| Salicylic acid<br>69-72-7 | not sensitising | Mouse local lymphnode assay (LLNA) | mouse | equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| 2,4,6-tris(dimethylaminomethyl)phenol<br>90-72-2 | not sensitising | Buehler test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |
| 2,4,6-tris(dimethylaminomethyl)phenol<br>90-72-2 | not sensitising | Guinea pig maximisation test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine<br>1760-24-3 | Sub-Category 1A (sensitising) | Guinea pig maximisation test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |
| 3,6-diazaoctanethylenediamine<br>112-24-3 | sensitising | Guinea pig maximisation test | guinea pig | equivalent or similar to OECD Guideline 406 (Skin Sensitisation) |

**Germ cell mutagenicity:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Type of study / Route of administration | Metabolic activation / Exposure time | Species | Method |
|---|---|---|---|---|---|
| Isophorone diamine 2855-13-2 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | EU Method B.13/14 (Mutagenicity) |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine 68082-29-1 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| benzyl alcohol 100-51-6 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Salicylic acid 69-72-7 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| Salicylic acid 69-72-7 | negative | in vitro mammalian chromosome aberration test | with and without | | equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| Salicylic acid 69-72-7 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| 2,4,6-tris(dimethylaminomethyl)phenol 90-72-2 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| 2,4,6-tris(dimethylaminomethyl)phenol 90-72-2 | negative | in vitro mammalian chromosome aberration test | with and without | | OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) |
| 2,4,6-tris(dimethylaminomethyl)phenol 90-72-2 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |
| 3,6-diazaoctanethylenediamine 112-24-3 | positive | bacterial reverse mutation assay (e.g Ames test) | with and without | | OECD Guideline 471 (Bacterial Reverse Mutation Assay) |
| 3,6-diazaoctanethylenediamine 112-24-3 | negative | DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro | with and without | | OECD Guideline 482 (Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro) |

**Carcinogenicity**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous components CAS-No. | Result | Route of application | Exposure time / Frequency of treatment | Species | Sex | Method |
|---|---|---|---|---|---|---|
| benzyl alcohol 100-51-6 | not carcinogenic | oral: gavage | 104 weeks once daily, 5 days/week | rat | male/female | equivalent or similar OECD Guideline 451 (Carcinogenicity Studies) |
| Salicylic acid 69-72-7 | not carcinogenic | oral: feed | 2 years daily | rat | male/female | not specified |

**Reproductive toxicity:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Result / Value | Test type | Route of application | Species | Method |
|---|---|---|---|---|---|
| benzyl alcohol<br>100-51-6 | NOAEL P 200 mg/kg | screening | oral: gavage | mouse | not specified |
| Salicylic acid<br>69-72-7 | NOAEL P 250 mg/kg | three-generation study | oral: feed | rat | equivalent or similar to OECD Guideline 416 (Two-Generation Reproduction Toxicity Study) |

**STOT-single exposure:**

No data available.

**STOT-repeated exposure:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Result / Value | Route of application | Exposure time / Frequency of treatment | Species | Method |
|---|---|---|---|---|---|
| Isophorone diamine<br>2855-13-2 | NOAEL < 60 mg/kg | oral: drinking water | 13 weeks | rat | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| benzyl alcohol<br>100-51-6 | NOAEL 400 mg/kg | oral: gavage | 13 weeks<br>once daily, 5 days/week | rat | equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | NOAEL 15 mg/kg | oral: gavage | 28 d<br>daily | rat | OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents) |
| Salicylic acid<br>69-72-7 | NOAEL 50 mg/kg | oral: feed | 2 years<br>daily | rat | not specified |
| 3,6-diazaoctanethylenediamine<br>112-24-3 | LOAEL 50 mg/kg | oral: gavage | 26 w<br>daily | rat | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| 3,6-diazaoctanethylenediamine<br>112-24-3 | NOAEL 50 mg/kg | oral: gavage | 26 w<br>daily | rat | OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents) |
| 4,4'-Methylenebis(cyclohexylamine)<br>1761-71-3 | NOAEL 15 mg/kg | oral: gavage | M: 36 d / F: 48-52 d<br>daily | rat | OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |

**Aspiration hazard:**

No data available.

**11.2 Information on other hazards**

not applicable

## SECTION 12: Ecological information

**General ecological information:**
Do not empty into drains / surface water / ground water.

**12.1. Toxicity**

**Toxicity (Fish):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| Isophorone diamine<br>2855-13-2 | LC50 | 110 mg/l | 96 h | Leuciscus idus | EU Method C.1 (Acute Toxicity for Fish) |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine<br>68082-29-1 | LC50 | 7,07 mg/l | 96 h | Danio rerio | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| benzyl alcohol<br>100-51-6 | LC50 | 460 mg/l | 96 h | Pimephales promelas | EPA OPP 72-1 (Fish Acute Toxicity Test) |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | LC50 | 96 mg/l | 96 h | Poecilia reticulata | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 1,5-Pentanediamine, 2-methyl-<br>15520-10-2 | LC50 | 1.825 mg/l | 96 h | Pimephales promelas | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Salicylic acid<br>69-72-7 | LC50 | 1.370 mg/l | 96 h | Pimephales promelas | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 2,4,6-tris(dimethylaminomethyl)phenol<br>90-72-2 | LC50 | 153 mg/l | 96 h | Brachydanio rerio (new name: Danio rerio) | ISO 7346-1 (Determination of the Acute Lethal Toxicity of Substances to a Freshwater Fish [Brachydanio rerio Hamilton-Buchanan (Teleostei, Cyprinidae)] |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine<br>1760-24-3 | LC50 | 168 mg/l | 96 h | Pimephales promelas | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 3,6-diazaoctanethylenediamine<br>112-24-3 | LC50 | 570 mg/l | 96 h | Poecilia reticulata | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| 4,4'-Methylenebis(cyclohexylamine)<br>1761-71-3 | LC50 | > 100 mg/l | 96 h | Leuciscus idus | DIN 38412-15 |

**Toxicity (aquatic invertebrates):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| Isophorone diamine<br>2855-13-2 | EC50 | 23 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine<br>68082-29-1 | EC50 | 7,07 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| benzyl alcohol<br>100-51-6 | EC50 | 230 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | Immobilisation Test) |
| Formaldehyde, polymer with benzenamine, hydrogenated 135108-88-2 | EC50 | 15,4 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 1,5-Pentanediamine, 2-methyl- 15520-10-2 | EC50 | 19,8 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| Salicylic acid 69-72-7 | EC50 | 870 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 2,4,6-tris(dimethylaminomethyl)phenol 90-72-2 | EC50 | > 100 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | EC50 | 87,4 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 3,6-diazaoctanethylenediamine 112-24-3 | EC50 | 31 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |
| 4,4'-Methylenebis(cyclohexylamine) 1761-71-3 | EC50 | 7,07 mg/l | 48 h | Daphnia magna | OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) |

**Chronic toxicity (aquatic invertebrates):**

The table below presents the data of the classified substances present in the mixture.

| **Hazardous substances CAS-No.** | **Value type** | **Value** | **Exposure time** | **Species** | **Method** |
|---|---|---|---|---|---|
| Isophorone diamine 2855-13-2 | NOEC | 3 mg/l | 21 d | Daphnia magna | OECD Guideline 202 (Daphnia sp. Chronic Immobilisation Test) |
| benzyl alcohol 100-51-6 | NOEC | 51 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| 1,5-Pentanediamine, 2-methyl- 15520-10-2 | NOEC | 4,16 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| Salicylic acid 69-72-7 | NOEC | 10 mg/l | 21 d | Daphnia magna | OECD Guideline 202 (Daphnia sp. Chronic Immobilisation Test) |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine 1760-24-3 | NOEC | > 1 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |
| 4,4'-Methylenebis(cyclohexylamine) 1761-71-3 | NOEC | 4 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia magna, Reproduction Test) |

**Toxicity (Algae):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|
| Isophorone diamine<br>2855-13-2 | EC10 | 11,2 mg/l | 72 h | Desmodesmus subspicatus | EU Method C.3 (Algal Inhibition test) |
| Isophorone diamine<br>2855-13-2 | EC50 | > 50 mg/l | 72 h | Desmodesmus subspicatus | EU Method C.3 (Algal Inhibition test) |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine<br>68082-29-1 | EC50 | 4,34 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine<br>68082-29-1 | NOEC | 0,5 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| benzyl alcohol<br>100-51-6 | EC50 | 770 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| benzyl alcohol<br>100-51-6 | NOEC | 310 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | EC10 | 1,2 mg/l | 72 h | Desmodesmus subspicatus | EU Method C.3 (Algal Inhibition test) |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | EC50 | 43,94 mg/l | 72 h | Desmodesmus subspicatus | EU Method C.3 (Algal Inhibition test) |
| 1,5-Pentanediamine, 2-methyl-<br>15520-10-2 | EC50 | > 100 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 1,5-Pentanediamine, 2-methyl-<br>15520-10-2 | NOEC | 10 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Salicylic acid<br>69-72-7 | EC50 | > 100 mg/l | 72 h | Scenedesmus subspicatus (new name: Desmodesmus subspicatus) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 2,4,6-tris(dimethylaminomethyl)phenol<br>90-72-2 | EC50 | 46,7 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 2,4,6-tris(dimethylaminomethyl)phenol<br>90-72-2 | NOEC | 6,44 mg/l | 72 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine<br>1760-24-3 | EC50 | 8,8 mg/l | 96 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine<br>1760-24-3 | NOEC | 3,1 mg/l | 96 h | Pseudokirchneriella subcapitata | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 3,6-diazaoctanethylenediamine<br>112-24-3 | EC50 | 20 mg/l | 72 h | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| 4,4'-Methylenebis(cyclohexylamine)<br>1761-71-3 | EC50 | > 140 - 200 mg/l | 72 h | Scenedesmus subspicatus (new name: Desmodesmus subspicatus) | DIN 38412-09 |
| 4,4'-Methylenebis(cyclohexylamine)<br>1761-71-3 | EC10 | 100 mg/l | 72 h | Scenedesmus subspicatus (new name: Desmodesmus subspicatus) | DIN 38412-09 |

**Toxicity (microorganisms):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Value type | Value | Exposure time | Species | Method |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Isophorone diamine<br>2855-13-2 | EC10 | 1.120 mg/l | 18 h | Pseudomonas putida | DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test) |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine<br>68082-29-1 | EC10 | 130 mg/l | 3 h | activated sludge of a predominantly domestic sewage | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| benzyl alcohol<br>100-51-6 | EC10 | 658 mg/l | 17 h | Pseudomonas putida | DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test) |
| Salicylic acid<br>69-72-7 | EC50 | > 1.000 mg/l | 3 h | not specified | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| 2,4,6-tris(dimethylaminomethyl)phenol<br>90-72-2 | EC0 | 27 mg/l | 16 h | Pseudomonas putida | DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test) |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine<br>1760-24-3 | EC 50 | 435 mg/l | 3 h | | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |
| 3,6-diazaoctanethylenediamine<br>112-24-3 | EC0 | 137 mg/l | 30 min | Pseudomonas putida | DIN 38412, part 27 (Bacterial oxygen consumption test) |
| 4,4'-Methylenebis(cyclohexylamine)<br>1761-71-3 | EC20 | > 1.000 mg/l | 3 h | activated sludge, industrial | OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) |

**12.2. Persistence and degradability**

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Result | Test type | Degradability | Exposure time | Method |
|---|---|---|---|---|---|
| Isophorone diamine<br>2855-13-2 | not readily biodegradable. | aerobic | 8 % | 28 d | EU Method C.4-A (Determination of the "Ready" BiodegradabilityDissolved Organic Carbon (DOC) Die-Away Test) |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine<br>68082-29-1 | not readily biodegradable. | no data | 0 - 60 % | 28 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| benzyl alcohol<br>100-51-6 | readily biodegradable | aerobic | 92 - 96 % | 14 d | OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I)) |
| 1,5-Pentanediamine, 2-methyl-<br>15520-10-2 | readily biodegradable | aerobic | 100 % | 21 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| Salicylic acid<br>69-72-7 | readily biodegradable | aerobic | 88,1 % | 15 d | EU Method C.4-F (Determination of the "Ready" BiodegradabilityMITI Test) |
| Salicylic acid<br>69-72-7 | inherently biodegradable | aerobic | 100 % | 4 d | OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test) |
| 2,4,6-tris(dimethylaminomethyl)phenol<br>90-72-2 | not readily biodegradable. | aerobic | 4 % | 28 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine<br>1760-24-3 | | aerobic | 50 % | | OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test) |
| 3,6-diazaoctanethylenediamine<br>112-24-3 | not inherently biodegradable | aerobic | 0 % | 28 d | OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test) |
| 3,6-diazaoctanethylenediamine<br>112-24-3 | not readily biodegradable. | aerobic | 0 % | 162 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| 4,4'-Methylenebis(cyclohexylamine)<br>1761-71-3 | not readily biodegradable. | aerobic | 0 % | 28 d | OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I)) |

**12.3. Bioaccumulative potential**

The table below presents the data of the classified substances present in the mixture.

| Hazardous substances<br>CAS-No. | Bioconcentration factor (BCF) | Exposure time | Temperature | Species | Method |
|---|---|---|---|---|---|
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | 18 - 219 | 56 d | | Cyprinus carpio | OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish) |
| 4,4'-Methylenebis(cyclohexylamine)<br>1761-71-3 | < 60 | 60 d | 24 °C | Cyprinus carpio | OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish) |

**12.4. Mobility in soil**

The table below presents the data of the classified substances present in the mixture.

| **Hazardous substances**<br>**CAS-No.** | **LogPow** | **Temperature** | **Method** |
|---|---|---|---|
| Isophorone diamine<br>2855-13-2 | 0,99 | 23 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine<br>68082-29-1 | 10,34 | | QSAR (Quantitative Structure Activity Relationship) |
| benzyl alcohol<br>100-51-6 | 1,05 | 20 °C | EU Method A.8 (Partition Coefficient) |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | 2,68 | 21 °C | EU Method A.8 (Partition Coefficient) |
| 1,5-Pentanediamine, 2-methyl-<br>15520-10-2 | <= 1 | 25 °C | other guideline: |
| Salicylic acid<br>69-72-7 | 2,26 | 20 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| 2,4,6-tris(dimethylaminomethyl)phenol<br>90-72-2 | -0,66 | 21,5 °C | EPA OPPTS 830.7550 (Partition Coefficient, n-octanol / H2O, Shake Flask Method) |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine<br>1760-24-3 | -1,67 | | not specified |
| 3,6-diazaoctanethylenediamine<br>112-24-3 | -2,65 | | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |
| 4,4'-Methylenebis(cyclohexylamine)<br>1761-71-3 | 2,2 | 23 °C | OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method) |

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

The table below presents the data of the classified substances present in the mixture.

| **Hazardous substances**<br>**CAS-No.** | **PBT / vPvB** |
|---|---|
| Isophorone diamine<br>2855-13-2 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine<br>68082-29-1 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| benzyl alcohol<br>100-51-6 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 1,5-Pentanediamine, 2-methyl-<br>15520-10-2 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Salicylic acid<br>69-72-7 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 2,4,6-tris(dimethylaminomethyl)phenol<br>90-72-2 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| N-(3-(Trimethoxysilyl)propyl)ethylenediamine<br>1760-24-3 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 3,6-diazaoctanethylenediamine<br>112-24-3 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| 4,4'-Methylenebis(cyclohexylamine)<br>1761-71-3 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |

**12.6. Endocrine disrupting properties**

not applicable

**12.7. Other adverse effects**

No data available.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

Product disposal:
Do not empty into drains / surface water / ground water.
Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:
After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste code

08 04 09* waste adhesives and sealants containing organic solvents and other dangerous substances
The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

## SECTION 14: Transport information

**14.1. UN number or ID number**

| | |
|---|---|
| ADR | 1759 |
| RID | 1759 |
| ADN | 1759 |
| IMDG | 1759 |
| IATA | 1759 |

**14.2. UN proper shipping name**

| | |
|---|---|
| ADR | CORROSIVE SOLID, N.O.S. (Isophoronediamine,2-Methylpentane-1,5-diamine) |
| RID | CORROSIVE SOLID, N.O.S. (Isophoronediamine,2-Methylpentane-1,5-diamine) |
| ADN | CORROSIVE SOLID, N.O.S. (Isophoronediamine,2-Methylpentane-1,5-diamine) |
| IMDG | CORROSIVE SOLID, N.O.S. (Isophoronediamine,2-Methylpentane-1,5-diamine) |
| IATA | Corrosive solid, n.o.s. (Isophoronediamine,2-Methylpentane-1,5-diamine) |

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

| | |
|---|---|
| ADR | 8 |
| RID | 8 |
| ADN | 8 |
| IMDG | 8 |
| IATA | 8 |

**14.4. Packing group**

| | |
|---|---|
| ADR | II |
| RID | II |
| ADN | II |
| IMDG | II |
| IATA | II |

**14.5. Environmental hazards**

| | |
|---|---|
| ADR | not applicable |
| RID | not applicable |

| | |
|---|---|
| ADN | not applicable |
| IMDG | not applicable |
| IATA | not applicable |

**14.6. Special precautions for user**

| | |
|---|---|
| ADR | not applicable<br>Tunnelcode: (E) |
| RID | not applicable |
| ADN | not applicable |
| IMDG | not applicable |
| IATA | not applicable |

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

not applicable

## SECTION 15: Regulatory information

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

| | |
|---|---|
| Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009): | Not applicable |
| Prior Informed Consent (PIC) (Regulation (EU) No 649/2012): | Not applicable |
| Persistent organic pollutants (Regulation (EU) 2019/1021): | Not applicable |
| VOC content (2010/75/EC) | 7,48 % Combined A/B |

**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

**National regulations/information (Germany):**

| | |
|---|---|
| WGK: | WGK 3: highly hazardous to water (Ordinance on facilities for handling substances that are hazardous to water (AwSV) )<br>Classification according to AwSV, Annex 1 (5.2) |
| Storage class according to TRGS 510: | 8A |

## SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text
of all abbreviations indicated by codes in this safety data sheet are as follows:

H301 Toxic if swallowed.
H302 Harmful if swallowed.
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.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

| | |
|---|---|
| ED: | Substance identified as having endocrine disrupting properties |
| EU OEL: | Substance with a Union workplace exposure limit |
| EU EXPLD 1: | Substance listed in Annex I, Reg (EC) No. 2019/1148 |
| EU EXPLD 2 | Substance listed in Annex II, Reg (EC) No. 2019/1148 |
| SVHC: | Substance of very high concern (REACH Candidate List) |
| PBT: | Substance fulfilling persistent, bioaccumulative and toxic criteria |
| PBT/vPvB: | Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria |
| vPvB: | Substance fulfilling very persistent and very bioaccumulative criteria |

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