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

### 1.1 Product identifier

SuperCast™ - HARDENER

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

**Relevant identified uses**

Artwork and decorative applications.

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

Supplier: Eli-Chem Resins UK Ltd
212 Dunsfold Park
Canada Avenue
Cranleigh
GU6 8GA (UK)
+44 (0)1483 266636 (09:00 - 17:00 Mon-Thur / 09:00 - 16:00 Fri)
sales@elichem.co.uk

### 1.4 Emergency telephone number

Emergency number: +44 (0)1483 266636 office hours only

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

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

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

### 2.2 Label elements

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

**Hazard pictograms**

Corrosion (GHS05) · Exclamation mark (GHS07)

**Signal word**

Danger

**Hazard components for labelling**

3-aminomethyl-3,5,5-trimethylcyclohexylamine ; cas no. : 2855-13-2
1,3-cyclohexanedimethanamine ; cas no. : 2579-20-6

**Hazard statements**

| | |
|---|---|
| H314 | Causes severe skin burns and eye damage. |
| H302 | Harmful if swallowed. |
| H317 | May cause an allergic skin reaction. |

**Precautionary statements**

| | |
|---|---|
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |

| | |
|---|---|
| P310 | Immediately call a POISON CENTER/doctor. |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. |

### 2.3 Other hazards

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

### Adverse human health effects and symptoms

Contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH:
This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

### Adverse environmental effects

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

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

Contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH:
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

**Hazardous ingredients**

3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; REACH No. : 01-2119514687-32-xxxx ; EC No. : 220-666-8; CAS No. : 2855-13-2

| | |
|---|---|
| Weight fraction : | ≥ 20 - < 60 % |
| Classification 1272/2008 [CLP] : | Skin Corr. 1B ; H314 Eye Dam. 1 ; H318 Acute Tox. 4 ; H302 Skin Sens. 1A ; H317 |
| Specific Conc. Limits : | Skin Sens. 1A ; H317: C ≥ 0,001 % • (ATE - oral : 1030 mg/kg bw) |

BENZYL ALCOHOL ; REACH No. : 01-2119492630-38-xxxx ; EC No. : 202-859-9; CAS No. : 100-51-6

| | |
|---|---|
| Weight fraction : | ≥ 25 - < 50 % |
| Classification 1272/2008 [CLP] : | Acute Tox. 4 ; H302 Acute Tox. 4 ; H332 Eye Irrit. 2 ; H319 |
| Specific Conc. Limits : | (ATE - oral : 1620 mg/kg bw) |

1,3-CYCLOHEXANEDIMETHANAMINE ; REACH No. : 01-2119543741-41-xxxx ; EC No. : 219-941-5; CAS No. : 2579-20-6

| | |
|---|---|
| Weight fraction : | < 5 % |
| Classification 1272/2008 [CLP] : | Skin Corr. 1A ; H314 Eye Dam. 1 ; H318 Acute Tox. 4 ; H302 Acute Tox. 4 ; H312 Aquatic Chronic 3 ; H412 |

**Additional information**

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

### General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove contaminated, saturated clothing immediately. Wash thoroughly the body (shower or bath). Remove affected person from the danger area and lay down. Transport affected person in lying position, in case of shortness of breath in half-sitting position. Put victim at rest, cover with a blanket and keep warm. Do not leave affected person unattended.

### Following inhalation

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial

respiration. Call a physician immediately.

### In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. In case of skin reactions, consult a physician. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure. In case of skin irritation, consult a physician.

### After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Protect uninjured eye.

### Following ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting.

### Self-protection of the first aider

First aider: Pay attention to self-protection!

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

Following inhalation Irritation to respiratory tract Pulmonary irritation
Following skin contact Causes severe burns. erythema (redness) May cause an allergic skin reaction.
After eye contact Causes serious eye damage.
Following ingestion Causes severe burns. Gastrointestinal complaints Abdominal pain If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

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

Treat symptomatically. First Aid, decontamination, treatment of symptoms. Subsequent observance for pneumonia and lung oedema.

# SECTION 5: Firefighting measures

## 5.1 Extinguishing media

### Suitable extinguishing media

Carbon dioxide (CO2) Extinguishing powder alcohol resistant foam Water spray jet Water

### Unsuitable extinguishing media

Strong water jet

## 5.2 Special hazards arising from the substance or mixture

In case of fire may be liberated: Nitrogen oxides (NOx) Carbon monoxide Carbon dioxide (CO2) Ammonia (NH3) Phenols

## 5.3 Advice for firefighters

### Special protective equipment for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Move undamaged containers from immediate hazard area if it can be done safely. Use water spray jet to protect personnel and to cool endangered containers. Do not allow run-off from fire-fighting to enter drains or water courses. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

# SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures

### For non-emergency personnel

Use personal protection equipment. See protective measures under point 7 and 8.

### For emergency responders

Use personal protection equipment. Provide adequate ventilation. Remove persons to safety. See protective measures under point 7 and 8.

## 6.2 Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

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

#### For containment

Cover drains. Stop leak if safe to do so. Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Take up mechanically, placing in appropriate containers for disposal.

#### For cleaning up

Collect in closed and suitable containers for disposal. Clean contaminated articles and floor according to the environmental legislation.

### 6.4 Reference to other sections

Personal protection equipment: see section 8
Disposal: see section 13

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Protective measures

It is recommended to design all work processes always so that the following is excluded: Inhalation of vapours or spray/mists Skin contact Eye contact
Wear personal protection equipment (refer to section 8). If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

**Measures to prevent fire**

Keep away from sources of ignition - No smoking. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

**Environmental precautions**

Shafts and sewers must be protected from entry of the product. Provide for retaining containers, e.g. floor pan without outflow.

#### Advices on general occupational hygiene

Working places should be designed to allow cleaning at any time. Floors, walls and other surfaces in the hazard area must be cleaned regularly. After use replace the closing cap immediately. Wash hands and face before breaks and after work and take a shower if necessary. Wash hands before eating, drinking or smoking. Remove contaminated, saturated clothing immediately. Wash contaminated clothing prior to re-use.

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

#### Technical measures and storage conditions

Only use containers specifically approved for the substance/product. Protect containers against damage. Keep container tightly closed and in a well-ventilated place.

#### Packaging materials

Unsuitable container/equipment material: Copper Alloy, containing copper

#### Hints on joint storage

**Storage class (TRGS 510) :** 8A

**Keep away from**

Acid Oxidizing agent
Keep away from food, drink and animal feedingstuffs.

### 7.3 Specific end use(s)

Observe technical data sheet.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limit values

BENZYL ALCOHOL ; CAS No. : 100-51-6

Limit value type (country of origin) : TRGS 900 ( D )
Limit value : 5 ppm / 22 mg/m$^3$

Peak limitation : 2 (I)
Remark : H, Y
Version :

## DNEL-/PNEC-values

### DNEL/DMEL

3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2

Limit value type : DNEL Consumer (systemic)
Exposure route : Oral
Exposure frequency : Long-term
Limit value : 0,526 mg/kg

Limit value type : DNEL worker (local)
Exposure route : Inhalation
Exposure frequency : Short-term
Limit value : 0,073 mg/m$^3$

Limit value type : DNEL worker (local)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 0,073 mg/m$^3$

BENZYL ALCOHOL ; CAS No. : 100-51-6

Limit value type : DNEL Consumer (systemic)
Exposure route : Dermal
Exposure frequency : Short-term
Limit value : 28,5 mg/kg

Limit value type : DNEL Consumer (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 5,7 mg/kg

Limit value type : DNEL Consumer (systemic)
Exposure route : Inhalation
Exposure frequency : Short-term
Limit value : 95,5 mg/m$^3$

Limit value type : DNEL Consumer (systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 19,1 mg/m$^3$

Limit value type : DNEL Consumer (systemic)
Exposure route : Oral
Exposure frequency : Short-term
Limit value : 25 mg/kg

Limit value type : DNEL Consumer (systemic)
Exposure route : Oral
Exposure frequency : Long-term
Limit value : 5 mg/kg

Limit value type : DNEL worker (systemic)
Exposure route : Dermal
Exposure frequency : Short-term
Limit value : 47 mg/kg

Limit value type : DNEL worker (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 9,5 mg/kg

Limit value type : DNEL worker (systemic)
Exposure route : Inhalation
Exposure frequency : Short-term
Limit value : 450 mg/m$^3$

| | |
|---|---|
| Limit value type : | DNEL worker (systemic) |
| Exposure route : | Inhalation |
| Exposure frequency : | Long-term |
| Limit value : | 5 mg/kg |

**PNEC**

3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2

| | |
|---|---|
| Limit value type : | PNEC (Aquatic, freshwater) |
| Limit value : | 0,06 mg/l |
| Limit value type : | PNEC (Aquatic, intermittent release) |
| Limit value : | 0,23 mg/l |
| Limit value type : | PNEC (Aquatic, marine water) |
| Limit value : | 0,006 mg/l |
| Limit value type : | PNEC (Sediment, freshwater) |
| Limit value : | 5,784 mg/kg |
| Limit value type : | PNEC (Sediment, marine water) |
| Limit value : | 0,578 mg/kg |
| Limit value type : | PNEC (Soil) |
| Limit value : | 1,121 mg/kg |
| Limit value type : | PNEC (Sewage treatment plant) |
| Limit value : | 3,18 mg/l |

BENZYL ALCOHOL ; CAS No. : 100-51-6

| | |
|---|---|
| Limit value type : | PNEC (Aquatic, freshwater) |
| Limit value : | 1 mg/l |
| Limit value type : | PNEC (Aquatic, intermittent release) |
| Limit value : | 2,3 mg/l |
| Limit value type : | PNEC (Aquatic, marine water) |
| Limit value : | 0,1 mg/l |
| Limit value type : | PNEC (Sediment, freshwater) |
| Limit value : | 5,27 mg/kg |
| Limit value type : | PNEC (Sediment, marine water) |
| Limit value : | 0,527 mg/kg |
| Limit value type : | PNEC (Soil) |
| Limit value : | 0,456 mg/kg |
| Limit value type : | PNEC (Sewage treatment plant) |
| Limit value : | 39 mg/l |

## 8.2 Exposure controls

### Appropriate engineering controls

Provide for sufficient ventilation. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Technical measures and the application of suitable work processes have priority over personal protection equipment.

### Personal protection equipment

### Eye/face protection

**Suitable eye protection**

Eye glasses with side protection
DIN-/EN-Norms : EN 166
Provide eye shower and label its location conspicuously

### Skin protection

**Hand protection**

**Suitable gloves type** : Gloves with long cuffs

**Suitable material** : NBR (Nitrile rubber) PVC (polyvinyl chloride) CR (polychloroprene, chloroprene rubber) Butyl caoutchouc (butyl rubber) FKM (fluoro rubber)

**Wearing time with occasional contact (splashes)** : > 60 min

**Wearing time with permanent contact** : > 480 min

**Remark** : When handling with chemical substances, protective gloves must be worn with the CE-label including the

four control digits.
Breakthrough times and swelling properties of the material must be taken into consideration.
Tested protective gloves must be worn
The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
DIN-/EN-Norms : EN ISO 374

**Body protection**

Suitable protective clothing

**Remark** :
DIN-/EN-Norms
Protective clothing. : EN 14605
footwear : EN ISO 20345
Breakthrough times and swelling properties of the material must be taken into consideration.
Only wear fitting, comfortable and clean protective clothing.

### Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.
Respiratory protection necessary at: exceeding exposure limit values insufficient ventilation insufficient exhaust

**Suitable respiratory protection apparatus**

Combination filtering device Filter type: A
EN 14387

**Remark**

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. Use only respiratory protection equipment with CE-symbol including four digit test number.

### General information

When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes. Wash contaminated clothing immediately. Wash hands before breaks and after work. Emergency shower installed

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**Appearance :** Liquid

**Colour :** light yellow

**Odour :** Amines

### Safety characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Freezing point :** | (1013 hPa) | | No data available | | |
| **Initial boiling point and boiling range :** | (1013 hPa) | > | 200 | °C | |
| **Decomposition temperature :** | (1013 hPa) | | No data available | | |
| **Flash point :** | | > | 100 | °C | |
| **Auto-ignition temperature :** | | | No data available | | |
| **Lower explosion limit :** | | | No data available | | |
| **Upper explosion limit :** | | | No data available | | |
| **Vapour pressure :** | (50 °C) | | not determined | | |
| **Density :** | (25 °C) | | 1,05 | g/cm³ | |
| **Relative density :** | (20 °C) | | No data available | | |
| **Water solubility :** | (20 °C) | | No data available | | |
| **pH :** | (20 °C / 10 g/l) | | No data available | | |
| **log P O/W :** | | | No data available | | |
| **Flow time :** | (20 °C) | | No data available | | DIN-cup 4 mm |
| **Viscosity :** | (25 °C) | approx. | 2500 | mPa*s | |
| **Odour threshold :** | | | No data available | | |
| **Relative vapour density :** | (20 °C) | | No data available | | |

**Flammable solids :** Not applicable.
**Flammable gases :** Not applicable.

### 9.2 Other information

partially miscible : Water

**Other safety characteristics**

**Evaporation rate**

No data available

**Miscibility**

No data available

**Conductivity**

No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The product is stable under storage at normal ambient temperatures.

### 10.2 Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

### 10.3 Possibility of hazardous reactions

Violent reaction with: Oxidising agent, strong. Strong acid

### 10.4 Conditions to avoid

Keep away from heat.

### 10.5 Incompatible materials

Oxidising agent, strong. Strong acid

### 10.6 Hazardous decomposition products

Does not decompose when used for intended uses.

## SECTION 11: Toxicological information

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

#### Acute toxicity

**Acute oral toxicity**

| | |
|---|---|
| Parameter : | LD50 (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2) |
| Exposure route : | Oral |
| Species : | Rat |
| Effective dose : | 1030 mg/kg |
| Method : | OECD 401 |
| Parameter : | LC50 (BENZYL ALCOHOL ; CAS No. : 100-51-6) |
| Exposure route : | Oral |
| Species : | Rat |
| Effective dose : | 1620 mg/kg |
| Parameter : | LD50 (1,3-CYCLOHEXANEDIMETHANAMINE ; CAS No. : 2579-20-6) |
| Exposure route : | Oral |
| Species : | Rat |
| Effective dose : | 700 mg/kg |
| Method : | OECD 401 |

**Acute dermal toxicity**

| | |
|---|---|
| Parameter : | LD50 (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2) |
| Exposure route : | Dermal |
| Species : | Rat |

| | |
|---|---|
| Effective dose : | > 2000 mg/kg |
| Method : | OECD 402 |
| Parameter : | LD50 (1,3-CYCLOHEXANEDIMETHANAMINE ; CAS No. : 2579-20-6) |
| Exposure route : | Dermal |
| Species : | Rat |
| Effective dose : | 1700 mg/kg |
| Method : | OECD 402 |

**Acute inhalation toxicity**

| | |
|---|---|
| Parameter : | LC50 (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2) |
| Exposure route : | Inhalation |
| Species : | Rat |
| Effective dose : | > 5,01 mg/l |
| Exposure time : | 4 h |
| Method : | OECD 403 |
| Parameter : | LC50 (BENZYL ALCOHOL ; CAS No. : 100-51-6) |
| Exposure route : | Inhalation (vapour) |
| Effective dose : | 11 mg/l |
| Exposure time : | 4 h |
| Method : | Calculated |
| Parameter : | LC50 (BENZYL ALCOHOL ; CAS No. : 100-51-6) |
| Exposure route : | Inhalation (dust/mist) |
| Species : | Rat |
| Effective dose : | > 4178 mg/m$^3$ |
| Exposure time : | 4 h |
| Method : | OECD 403 |

## Corrosion

Product characteristics : Causes severe skin burns and eye damage.

**Skin corrosion/irritation**

| | |
|---|---|
| Parameter : | Skin corrosion/irritation (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2) |
| Species : | Rabbit |
| Result : | Corrosive |
| Method : | OECD 404 |
| Parameter : | Skin corrosion/irritation (BENZYL ALCOHOL ; CAS No. : 100-51-6) |
| Species : | Rabbit |
| Result : | Irritant |
| Method : | OECD 404 |

Product characteristics : corrosive

**Serious eye damage/eye irritation**

| | |
|---|---|
| Parameter : | Serious eye damage/eye irritation (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2) |
| Species : | Rabbit |
| Result : | Causes serious eye damage |
| Method : | OECD 405 |
| Parameter : | Serious eye damage/eye irritation (BENZYL ALCOHOL ; CAS No. : 100-51-6) |
| Species : | Rabbit |
| Result : | slightly irritant |
| Method : | OECD 405 |

Product characteristics : Causes serious eye damage.

## Respiratory or skin sensitisation

**Skin sensitisation**

| | |
|---|---|
| Parameter : | Skin sensitisation (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2) |
| Species : | Guinea pig |

| | |
|---|---|
| Result : | Sensitising. Strong sensitiser (Subcategory 1A). |
| Method : | OECD 406 |
| Parameter : | Skin sensitisation (BENZYL ALCOHOL ; CAS No. : 100-51-6) |
| Species : | Guinea pig |
| Result : | Not sensitising. |
| Method : | OECD 406 |

Product characteristics : May cause an allergic skin reaction.

**Sensitisation to the respiratory tract**

No data available

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

**Overall assessment on CMR properties**

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

### STOT-single exposure

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

### STOT-repeated exposure

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

### Aspiration hazard

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

## 11.2 Information on other hazards

### Endocrine disrupting properties

Contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH:
This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

## SECTION 12: Ecological information

## 12.1 Toxicity

### Aquatic toxicity

**Acute (short-term) fish toxicity**

| | |
|---|---|
| Parameter : | LC50 (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2) |
| Species : | Leuciscus idus (golden orfe) |
| Effective dose : | 110 mg/l |
| Exposure time : | 96 h |
| Parameter : | LC50 (BENZYL ALCOHOL ; CAS No. : 100-51-6) |
| Species : | Pimephales promelas (fathead minnow) |
| Effective dose : | 460 mg/l |
| Exposure time : | 96 h |
| Parameter : | LC50 (1,3-CYCLOHEXANEDIMETHANAMINE ; CAS No. : 2579-20-6) |
| Species : | Leuciscus idus (golden orfe) |
| Effective dose : | 130 mg/l |
| Exposure time : | 96 h |
| Method : | DIN 38412 / part 15 |

**Acute (short-term) toxicity to crustacea**

| | |
|---|---|
| Parameter : | EC50 (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2) |
| Species : | Daphnia magna (Big water flea) |
| Effective dose : | 23 mg/l |
| Exposure time : | 48 h |
| Method : | OECD 202 |
| Parameter : | EC50 (BENZYL ALCOHOL ; CAS No. : 100-51-6) |
| Species : | Daphnia magna (Big water flea) |

| | |
|---|---|
| Effective dose : | 230 mg/l |
| Exposure time : | 48 h |
| Method : | OECD 202 |

**Chronic (long-term) toxicity to aquatic invertebrate**

| | |
|---|---|
| Parameter : | NOEC (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2) |
| Species : | Daphnia magna (Big water flea) |
| Effective dose : | 3 mg/l |
| Exposure time : | 21 day(s) |
| Method : | OECD 202 |
| Parameter : | NOEC (BENZYL ALCOHOL ; CAS No. : 100-51-6) |
| Species : | Daphnia magna (Big water flea) |
| Effective dose : | 51 mg/l |
| Exposure time : | 21 day(s) |
| Method : | OECD 211 |

**Acute (short-term) toxicity to algae and cyanobacteria**

| | |
|---|---|
| Parameter : | ErC50 (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2) |
| Species : | Scenedesmus subspicatus |
| Effective dose : | > 50 mg/l |
| Exposure time : | 72 h |
| Parameter : | IC50 (BENZYL ALCOHOL ; CAS No. : 100-51-6) |
| Species : | Pseudokirchneriella subcapitata |
| Effective dose : | 700 mg/l |
| Method : | OECD 201 |

**Chronic (long-term) toxicity to aquatic algae and cyanobacteria**

| | |
|---|---|
| Parameter : | NOEC (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2) |
| Species : | Scenedesmus subspicatus |
| Effective dose : | 1,5 mg/l |
| Exposure time : | 72 h |

**Toxicity to microorganisms**

| | |
|---|---|
| Parameter : | EC10 (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2) |
| Species : | Pseudomonas putida |
| Effective dose : | 1120 mg/l |
| Exposure time : | 18 h |
| Parameter : | EC50 (BENZYL ALCOHOL ; CAS No. : 100-51-6) |
| Effective dose : | 390 mg/l |
| Exposure time : | 24 h |
| Parameter : | EC50 (1,3-CYCLOHEXANEDIMETHANAMINE ; CAS No. : 2579-20-6) |
| Species : | Pseudomonas putida |
| Effective dose : | 90 mg/l |

## 12.2 Persistence and degradability

### Biodegradation

| | |
|---|---|
| Parameter : | Biodegradation (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2) |
| Degradation rate : | 8 % |
| Evaluation : | Not readily biodegradable (according to OECD criteria) |
| Parameter : | Biodegradation (BENZYL ALCOHOL ; CAS No. : 100-51-6) |
| Degradation rate : | 95 % |
| Method : | OECD 301A |
| Parameter : | Biodegradation (BENZYL ALCOHOL ; CAS No. : 100-51-6) |
| Degradation rate : | 92 % |
| Evaluation : | Readily biodegradable (according to OECD criteria). |
| Method : | OECD 302C |

### 12.3 Bioaccumulative potential

| | |
|---|---|
| Parameter : | Bioconcentration factor (BCF) (BENZYL ALCOHOL ; CAS No. : 100-51-6) |
| Value : | 1,37 |
| Parameter : | Partition coefficient n-octanol/water (log value) (3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE ; CAS No. : 2855-13-2) |
| Value : | 0,99 logPow |
| Parameter : | Partition coefficient n-octanol/water (log value) (BENZYL ALCOHOL ; CAS No. : 100-51-6) |
| Value : | 1,05 logPow |

### 12.4 Mobility in soil

No information 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

Contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH:
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

### 12.7 Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Dispose of waste according to applicable legislation. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.
Collect the waste separately. Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
Handle contaminated packages in the same way as the substance itself.

## 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. (ISOPHORONEDIAMINE · 1,3-CYCLOHEXANEDIMETHANAMINE)

**Sea transport (IMDG)**
AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONEDIAMINE · 1,3-CYCLOHEXANEDIMETHANAMINE)

**Air transport (ICAO-TI / IATA-DGR)**
AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONEDIAMINE · 1,3-CYCLOHEXANEDIMETHANAMINE)

### 14.3 Transport hazard class(es)

**Land transport (ADR/RID)**

| | |
|---|---|
| **Class(es) :** | 8 |
| **Classification code :** | C7 |
| **Hazard identification number (Kemler No.) :** | 80 |
| **Tunnel restriction code :** | E |
| **Special Provisions :** | LQ 1 l · E 2 |
| **Hazard label(s) :** | 8 |

**Sea transport (IMDG)**

| | |
|---|---|
| **Class(es) :** | 8 |
| **EmS-No. :** | F-A / S-B |

**Special Provisions :** LQ 1 l · E 2 · IMDG-Code segregation group 18 - Alkalis
**Hazard label(s) :** 8

**Air transport (ICAO-TI / IATA-DGR)**
**Class(es) :** 8
**Special Provisions :** E 2
**Hazard label(s) :** 8

### 14.4 Packing group
II

### 14.5 Environmental hazards
**Land transport (ADR/RID) :** No
**Sea transport (IMDG) :** No
**Air transport (ICAO-TI / IATA-DGR) :** No

### 14.6 Special precautions for user
Warning : corrosive.

### 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
**EU legislation**
**Authorisations and/or restrictions on use**
**Authorisations**
not applicable
**Restrictions on use**
**Regulation (EC) No. 1907/2006 (REACH), Annex XVII (restrictions)**
Use restriction according to REACH annex XVII, no. : 3, 75
**Restrictions of occupation**
Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
**Other regulations (EU)**
Contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: : None
**Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]**
This product is not classified according to Directive 2012/18/EU.
**Labelling for contents according to regulation (EC) No. 648/2004**
not applicable
**National regulations**
**Water hazard class**
Classification according to AwSV - Class : 2 (Obviously hazardous to water)
**Additional information**
Substance/product listed in the following inventories (All components are listed or exempted).

- TSCA
- EINECS/ELINCS/NLP
- DSL/NDSL
- AICS

- KECI
- PICCS
- IECSC
- NZIoC

### 15.2 Chemical Safety Assessment

Mixture: This information is not available.

## SECTION 16: Other information

### 16.1 Indication of changes

None

### 16.2 Abbreviations and acronyms

ADN : European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures) ADR : European agreement concerning the international carriage of dangerous goods by road (Accord européen relatif transport des merchandises dangereuses par route) AICS : Australian, Inventory of Chemical Substances ATE : Acute Toxicity Estimation BCF : Bio-concentration factor BOD : Biochemical oxygen demand Bw : Body weight CAS : Chemical Abstract Service CLP : Classification, labelling and Packaging CMR : Substances classified as Carcinogenic, Mutagenic or toxic for Reproduction CSA : Chemical Safety Assessment CSR : Chemical Safety Report DIN : German Standards Institute / German industrial norm (Deutsches Institut für Normung / Deutsche Industrienorm) DNEL : Derived No Effect Level DSL : Canada, Domestic Substances List EC50 : Effective Concentration 50% EINECS : European Inventory of Existing Commercial Chemical Substances ELINCS : European List of Notified Chemical Substances IARC : International Agency for Research on Cancer IATA : International Air Transport Association IBC : Intermediate Bulk Container IECSC : Inventory of Existing Chemical Substances in China IMDG Code : International Maritime Dangerous Goods Code IMO : International Maritime Organization ISO : International Standards Organisation IUCLID : International Uniform Chemical Information Database IUPAC : International Union for Pure Applied Chemistry KECI : Korea, Existing Chemical Inventory LC50 : Lethal Concentration 50% LD50 : Lethal Dose 50% LEV : Local exhaust ventilation LOAEL : Lowest Observed Adverse Effect Level OEL : Lowest observable effect level MAK : Treshold limit values Germany (Maximale Arbeitsplatzkonzentration - DFG) NDSL : Canada, Non-Domestic Substances List NIOSH : National Institute for Occupational Safety & Health NOAEC : No Observed Adverse Effect Concentration NOAEL : No observed adverse effect level NOEC : No Observed Effect Concentration NOEL : No Observed Effect Level NZIoC : New Zealand Inventory of Chemicals OECD : Organization for Economic Cooperation and Development OEL : Occupational Exposure Limit PBT : persistent, bioaccumulative, toxic PIC : Prior Informed Consent PICCS : Philipines Inventory of Commercial Chemical Substances PNEC : Predicted No Effect Concentration RID : Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer) QSAR : Quantitative Structure Activity Relation STP : Sewage treatment plant SVHC : Substance of Very High Concern TLV : Threshold Limit Value TSCA : Toxic Substance Control Act TWA : Time Weighted Average UVCB : Unknown or Variable Compositon, Complex Reaction Products, and Biological Materials VOC : Volatile organic compounds vPvB : very persistent, very bioaccumulative

### 16.3 Key literature references and sources for data

None

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

Calculation method.

### 16.5 Relevant H- and EUH-phrases (Number and full text)

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |

| | |
|---|---|
| H332 | Harmful if inhaled. |
| H412 | Harmful to aquatic life with long lasting effects. |

### 16.6 Training advice

None

### 16.7 Additional information

None