# SAFETY DATA SHEET

SPECIFIX - 40 CURING AGENT

## Section 1. Identification

**Product identifier** : SPECIFIX - 40 CURING AGENT

**Cat. No.** : 40200053, 50209044

**Container size** : 500 ml, 1 l

**Other means of identification** : Not available.

**Product type** : Liquid.

**Recommended use of the chemical and restrictions on use**

**Product use** : For embedding and impregnation of materialographic specimens

**Area of application** : Professional applications.

**Supplier's details** : Struers ApS
Pederstrupvej 84
DK-2750 Ballerup

Telephone: +45 44 600 800

**e-mail address of person responsible for this SDS** : sdsquestions@struers.dk

**Emergency telephone number (with hours of operation)** : +45 44 600 800 (Only during office hours)

## Section 2. Hazards identification

**Classification of the substance or mixture** :

| | |
|---|---|
| H302 | ACUTE TOXICITY (oral) - Category 4 |
| H313 | ACUTE TOXICITY (dermal) - Category 5 |
| H314 | SKIN CORROSION - Category 1B |
| H318 | SERIOUS EYE DAMAGE - Category 1 |
| H317 | SKIN SENSITISATION - Category 1 |
| H402 | SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3 |

**GHS label elements**

**Hazard pictograms** :

**Signal word** : Danger

**Hazard statements** :
H302 - Harmful if swallowed.
H313 - May be harmful in contact with skin.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H402 - Harmful to aquatic life.

# Section 2. Hazards identification

**Precautionary statements**

**Prevention** : P280 - Wear protective gloves, protective clothing and eye or face protection.
P273 - Avoid release to the environment.
P261 - Avoid breathing vapour.
P270 - Do not eat, drink or smoke when using this product.
P264 + P265 - Wash hands thoroughly after handling. Do not touch eyes.
P272 - Contaminated work clothing should not be allowed out of the workplace.

**Response** : P304 + P340, P316 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get emergency medical help immediately.
P301 + P316, P317, P330, P331 - IF SWALLOWED: Get emergency medical help immediately. Get medical help. Rinse mouth. Do NOT induce vomiting.
P302 + P316, P317, P352, P361, P354 - IF ON SKIN: Get emergency medical help immediately. Get medical help. Wash with plenty of water. Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
P333 + P317 - If skin irritation or rash occurs: Get medical help.
P362 + P364 - Take off contaminated clothing and wash it before reuse.
P363 - Wash contaminated clothing before reuse.
P305 + P354 + P338, P317 - IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.

**Storage** : P405 - Store locked up.

**Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Other hazards which do not result in classification** : Causes respiratory tract burns. Causes digestive tract burns.

# Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

**Other means of identification** : Not available.

| Ingredient name | % | Identifiers |
|---|---|---|
| 3-aminomethyl-3,5,5-trimethylcyclohexylamine | ≥50 - ≤75 | CAS: 2855-13-2 |
| benzyl alcohol | ≥25 - ≤50 | CAS: 100-51-6 |

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

# Section 4. First aid measures

**Description of necessary first aid measures**

**Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

# Section 4. First aid measures

**Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

## Most important symptoms/effects, acute and delayed

### Potential acute health effects

**Eye contact** : Causes serious eye damage.

**Inhalation** : Corrosive to the respiratory system.

**Skin contact** : Causes severe burns. May be harmful in contact with skin. May cause an allergic skin reaction.

**Ingestion** : May cause burns to mouth, throat and stomach. Harmful if swallowed. Corrosive to the digestive tract. Causes burns.

### Over-exposure signs/symptoms

**Eye contact** : Adverse symptoms may include the following:
pain
watering
redness

**Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing

**Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

**Ingestion** : Adverse symptoms may include the following:
stomach pains

# Section 4. First aid measures

**Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** : No specific treatment.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

**See toxicological information (Section 11)**

# Section 5. Firefighting measures

**Extinguishing media**

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

# Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

# Section 6. Accidental release measures

**Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

**Methods and material for containment and cleaning up**

**Small spill** : Stop leak if without risk. Move containers from spill area. Dispose of via a licensed waste disposal contractor. Absorb spill with inert material (e.g. dry sand or earth) and place in a chemical waste container.

**Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

# Section 7. Handling and storage

**Precautions for safe handling**

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

# Section 8. Exposure controls/personal protection

**Control parameters**

**Occupational exposure limits**

No exposure limit value known.

**Biological exposure indices**

No exposure indices known.

# Section 8. Exposure controls/personal protection

**Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

**Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Recommended: Butyl rubber gloves. The breakthrough time must be greater than the end use time of the product.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

# Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance**

**Physical state** : Liquid.

**Colour** : Colourless to light yellow.

**Odour** : Aromatic.

**Odour threshold** : Not available.

**pH** : Not applicable.

**Melting point/freezing point** : Not available.

**Boiling point or initial boiling point and boiling range** : Not available.

**Flash point** : Closed cup: 116°C (240.8°F)

**Evaporation rate** : Not available.

**Flammability** : Not available.

**Lower and upper explosion limit/flammability limit** : Not available.

**Vapour pressure** :

| Ingredient name | Vapour Pressure at 20˚C | | | Vapour pressure at 50˚C | | |
|---|---|---|---|---|---|---|
| | mm Hg | kPa | Method | mm Hg | kPa | Method |
| benzyl alcohol | 0.05 | 0.0067 | | 0.5 | 0.067 | |

**Relative vapour density** : Not available.

**Relative density** : 0.97

**Solubility(ies)** :

| Media | Result |
|---|---|
| water | Not soluble |

**Miscible with water** : No.

**Partition coefficient: n-octanol/water** : Not applicable.

**Auto-ignition temperature** :

| Ingredient name | °C | °F | Method |
|---|---|---|---|
| 3-aminomethyl-3,5,5-trimethylcyclohexylamine | 380 | 716 | |

**Decomposition temperature** : Not available.

**Viscosity** : Dynamic (room temperature): Not available.
Kinematic (room temperature): 23.5 $mm^2/s$ (23.5 cSt)
Kinematic (40°C (104°F)): Not available.

**Flow time (ISO 2431)** : Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

**Other information**

**Physical/chemical properties comments** : No additional information.

# Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.

**Conditions to avoid** : Keep away from heat and direct sunlight.

**Incompatible materials** : Reactive or incompatible with the following materials: oxidising materials.

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

# Section 11. Toxicological information

## Information on toxicological effects

### Acute toxicity

| Product/ingredient name | Result | |
|---|---|---|
| 3-aminomethyl-3,5,5-trimethylcyclohexylamine | **Rat - Male, Female - Dermal - LD50**<br>>2000 mg/kg | OECD 402 [Acute Dermal Toxicity] |
| | **Rat - Oral - LD50**<br>1030 mg/kg | |
| | **Rat - Male, Female - Inhalation - LC50 Dusts and mists**<br>>5.01 mg/l [4 hours] | OECD 403 [Acute Inhalation Toxicity] |
| benzyl alcohol | **Rat - Oral - LD50**<br>1620 mg/kg | |
| | **Rat - Male, Female - Inhalation - LC50 Dusts and mists**<br>>5400 mg/m³ [4 hours] | OECD [Acute Inhalation Toxicity] |

**Conclusion/Summary[Product]** : Not available.

### Skin corrosion/irritation

**Conclusion/Summary[Product]** : Not available.

### Serious eye damage/eye irritation

**Conclusion/Summary[Product]** : Not available.

### Respiratory corrosion/irritation

# Section 11. Toxicological information

**Conclusion/Summary[Product]** : Not available.

**Respiratory or skin sensitization**

**Skin**

**Conclusion/Summary[Product]** : Not available.

**Respiratory**

**Conclusion/Summary[Product]** : Not available.

**Germ cell mutagenicity**

**Conclusion/Summary[Product]** : Not available.

**Carcinogenicity**

**Conclusion/Summary[Product]** : Not available.

**Reproductive toxicity**

**Conclusion/Summary[Product]** : Not available.

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Information on likely routes of exposure**

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

**Potential acute health effects**

| | | |
|---|---|---|
| **Eye contact** | : | Causes serious eye damage. |
| **Inhalation** | : | Corrosive to the respiratory system. |
| **Skin contact** | : | Causes severe burns. May be harmful in contact with skin. May cause an allergic skin reaction. |
| **Ingestion** | : | May cause burns to mouth, throat and stomach. Harmful if swallowed. Corrosive to the digestive tract. Causes burns. |

# Section 11. Toxicological information

## Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:
pain
watering
redness

**Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing

**Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

**Ingestion** : Adverse symptoms may include the following:
stomach pains

## Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

## Potential chronic health effects

**Conclusion/Summary[Product]** : Not available.

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

## Numerical measures of toxicity

**Acute toxicity estimates**

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|---|---|---|---|---|
| SPECIFIX - 40 CURING AGENT<br>3-aminomethyl-3,5,5-trimethylcyclohexylamine<br>benzyl alcohol | 1205.6<br>1030<br>1620 | 4166.7<br>2500<br>N/A | N/A<br>N/A<br>N/A | N/A<br>N/A<br>N/A | N/A<br>N/A<br>N/A |

# Section 11. Toxicological information

# Section 12. Ecological information

## Toxicity

| Product/ingredient name | Result | |
|---|---|---|
| 3-aminomethyl-3,5,5-trimethylcyclohexylamine | **Acute - EC50 - Fresh water**<br>Daphnia - Water flea - *Daphnia magna*<br>Age: <24 hours<br>17.4 mg/l [48 hours] | Effect: Intoxication |
| | **Acute - LC50 - Fresh water**<br>Fish - *Leuciscus idus*<br>110 mg/l [96 hours] | EU C.1 |
| | **Acute - NOEC - Marine water**<br>Algae<br>100 mg/l [96 hours] | |
| | **Acute - LC50 - Marine water**<br>Algae<br>388 mg/l [96 hours] | |
| | **Chronic - NOEC - Fresh water**<br>Daphnia<br>3 mg/l [21 days] | OECD 202 [Freshwater Alga and Cyanobacteria, Growth Inhibition Test] |
| benzyl alcohol | **Acute - EC50**<br>Daphnia - *Daphnia magna*<br>230 mg/l [48 hours] | OECD 202 [Daphnia sp. Acute Immobilization Test and Reproduction Test] |
| | **Chronic - NOEC - Fresh water**<br>Daphnia<br>51 mg/l [21 days] | OECD [Daphnia Magna Reproduction Test] |
| | **Acute - EC50 - Fresh water**<br>Algae<br>495 mg/l [72 hours] | OECD [Alga, Growth Inhibition Test] |
| | **Acute - NOEC - Fresh water**<br>Algae<br>309 mg/l [72 hours] | OECD [Alga, Growth Inhibition Test] |
| | **Acute - LC50 - Fresh water**<br>Fish - Fathead minnow - *Pimephales promelas* - Juvenile (Fledgling, Hatchling, Weanling)<br>Age: 4 to 8 weeks; Size: 1.1 to 3.1 cm<br>460 mg/l [96 hours] | Effect: Mortality |

**Conclusion/Summary[Product]** : Not available.

## Persistence and degradability

| Product/ingredient name | Result | |
|---|---|---|
| 3-aminomethyl-3,5,5-trimethylcyclohexylamine | **Aerobic - 6.9 mg/l**<br>8% [28 days] - Not readily | EU C.4-A |

**Conclusion/Summary[Product]** : Not available.

# Section 12. Ecological information

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|---|---|---|
| 3-aminomethyl-3,5,5-trimethylcyclohexylamine | - | - | Not readily |
| benzyl alcohol | - | - | Readily |

**Bioaccumulative potential**

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| 3-aminomethyl-3,5,5-trimethylcyclohexylamine | 0.79 | - | Low |
| benzyl alcohol | 0.87 to 1.05 | - | Low |

**Mobility in soil**

**Soil/water partition coefficient** : Not available.

**Other adverse effects**

No known significant effects or critical hazards.

# Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

# Section 14. Transport information

| | UN | IMDG | IATA |
|---|---|---|---|
| **UN number** | UN2289 | UN2289 | UN2289 |
| **UN proper shipping name** | ISOPHORONEDIAMINE solution | ISOPHORONEDIAMINE solution | Isophoronediamine solution |
| **Transport hazard class(es)** | 8 | 8 | 8 |
| **Packing group** | III | III | III |
| **Environmental hazards** | No. | No. | No. |

# Section 14. Transport information

**Additional information**

**IMDG** : **Emergency schedules** F-A, S-B

**IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 5 L. Packaging instructions: 852. Cargo Aircraft Only: 60 L. Packaging instructions: 856. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y841.
**Special provisions** A803

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.

# Section 15. Regulatory information

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

# Section 16. Other information

**History**

**Date of issue/Date of revision** : 2026/03/20

**Date of previous issue** : 2025/01/13

**Version** : 4.01

**Prepared by** : Sphera Solutions

**Key to abbreviations** : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

# Section 16. Other information

N/A = Not available
SGG = Segregation Group
UN = United Nations

**Procedure used to derive the classification**

| Classification | Justification |
|---|---|
| ACUTE TOXICITY (oral) - Category 4 | Calculation method |
| ACUTE TOXICITY (dermal) - Category 5 | Calculation method |
| SKIN CORROSION - Category 1B | Calculation method |
| SERIOUS EYE DAMAGE - Category 1 | Calculation method |
| SKIN SENSITISATION - Category 1 | Calculation method |
| SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3 | Calculation method |

**References** : GHS - Globally Harmonised System of Classification and Labelling of Chemicals - Version : 9.
International transport regulations

**Indicates information that has changed from previously issued version.**

**Notice to reader**

**To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.**
**Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**