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

### 1.1 Product identifier

| | | |
|---|---|---|
| Trade name | : | thermosept® ED |
| Unique Formula Identifier (UFI) | : | GY00-R0DY-3009-3A7T |

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

| | | |
|---|---|---|
| Use of the Substance/Mixture | : | Disinfectants |
| Recommended restrictions on use | : | Restricted to professional users. |

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

| | | |
|---|---|---|
| Producer | : | Schülke & Mayr GmbH<br>Robert-Koch-Str. 2<br><br>22851 Norderstedt<br>Germany<br>Telephone: +49 (0)40/ 52100-0<br>Telefax: +49 (0)40/ 52100318<br>mail@schuelke.com<br>www.schuelke.com |
| Supplier | : | Schülke & Mayr UK Ltd.<br>Cygnet House<br>1, Jenkin Road<br><br>Sheffield S9 1AT<br>United Kingdom<br>Telephone: +44 114 254 35 00<br>Telefax: +44 114 254 35 01<br>mail.uk@schulke.com |
| E-mail address of person responsible for the SDS/Contact person | : | Application Specialists<br>+49 (0)40/ 521 00 666<br>AD@schuelke.com |

### 1.4 Emergency telephone number

| | | |
|---|---|---|
| Emergency telephone number | : | Carechem 24 International:+44 1235 239670 |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)**

| | |
|---|---|
| Acute toxicity, Category 4 | H302: Harmful if swallowed. |
| Acute toxicity, Category 4 | H332: Harmful if inhaled. |
| Skin corrosion, Sub-category 1B | H314: Causes severe skin burns and eye damage. |
| Serious eye damage, Category 1 | H318: Causes serious eye damage. |
| Respiratory sensitisation, Category 1 | H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin sensitisation, Category 1 | H317: May cause an allergic skin reaction. |
| Specific target organ toxicity - single exposure, Category 3, Respiratory system | H335: May cause respiratory irritation. |
| Long-term (chronic) aquatic hazard, Category 3 | H412: Harmful to aquatic life with long lasting effects. |

### 2.2 Label elements

**Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)**

Hazard pictograms :

Signal word : Danger

Hazard statements :

H302 + H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH071 Corrosive to the respiratory tract.

Precautionary statements :

**Prevention:**

P261 Avoid breathing vapours.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.

**Response:**

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340 IF INHALED: Remove person to fresh air and

keep comfortable for breathing.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

glutaral

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Solution of the following substances with harmless additives.

**Hazardous components**

| Chemical name | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification | Concentration (% w/w) |
|---|---|---|---|
| glutaral | 111-30-8<br>203-856-5<br>605-022-00-X<br>01-2119455549-26-XXXX | Acute Tox. 3; H301<br>Acute Tox. 2; H330<br>Skin Corr. 1B; H314<br>Eye Dam. 1; H318<br>Resp. Sens. 1; H334<br>Skin Sens. 1A; H317<br>STOT SE 3; H335 (Respiratory system)<br>Aquatic Acute 1; H400<br>Aquatic Chronic 2; H411<br>———<br>M-Factor (Acute aquatic toxicity): 1<br>———<br>specific concentration limit<br>STOT SE 3; H335<br>0.5 - < 5 % | >= 20 - < 25 |

| | | | |
|---|---|---|---|
| ethanol | 64-17-5<br>200-578-6<br>603-002-00-5<br>01-2119457610-43-XXXX | Flam. Liq. 2; H225<br>Eye Irrit. 2; H319 | >= 1 - < 10 |
| pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate | 140-01-2<br>205-391-3<br>607-736-00-7<br>01-2119474445-33-XXXX | Acute Tox. 4; H332<br>Skin Irrit. 2; H315<br>Eye Irrit. 2; H319<br>Repr. 2; H361d<br>STOT RE 2; H373 (Respiratory system)<br>specific concentration limit<br>Repr. 1B; H360D >= 3 % | >= 0.1 - < 1 |

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : Take off all contaminated clothing immediately.

If inhaled : Move the victim to fresh air and keep him calm.
No artificial respiration, mouth-to-mouth or mouth to nose. Use suitable instruments/apparatus.
If symptoms persist, call a physician.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
Consult a physician.

In case of eye contact : In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Obtain medical attention.

If swallowed : Do NOT induce vomiting.
Rinse mouth with water.
Give small amounts of water to drink.
Obtain medical attention.

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

Symptoms : Treat symptomatically.

Risks : Harmful if swallowed or if inhaled.
May cause an allergic skin reaction.
Causes serious eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
Causes severe burns.
Corrosive to the respiratory tract.

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

Treatment : For specialist advice physicians should contact the Poisons Information Service.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Dry powder
Foam
Water spray jet
Carbon dioxide (CO2)

Unsuitable extinguishing media : Do NOT use water jet.

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

Specific hazards during fire-fighting : No information available.

Hazardous combustion products : No hazardous combustion products are known

### 5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

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

Personal precautions : Ensure adequate ventilation.
Use personal protective equipment.

### 6.2 Environmental precautions

Environmental precautions : Do not flush into surface water.

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

Methods for cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

### 6.4 Reference to other sections

see Section 8 + 13

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : Avoid exceeding the given occupational exposure limits (see section 8).
Use only with adequate ventilation/personal protection.

Advice on protection against fire and explosion : No special protective measures against fire required.

Hygiene measures : Take off all contaminated clothing immediately. Keep away from food and drink.

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

Requirements for storage areas and containers : Store at room temperature in the original container.

Further information on storage conditions : Keep away from direct sunlight. Keep away from heat. Keep container tightly closed. Recommended storage temperature: 5 - 25°C

Advice on common storage : Do not store together with explosives, oxidizing agents, organic peroxides and infectious products.

### 7.3 Specific end use(s)

Specific use(s) : none

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Occupational Exposure Limits**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---|---|---|---|---|
| glutaral | 111-30-8 | TWA | 0.05 ppm<br>0.2 mg/m3 | GB EH40 |
| | Further information: Capable of causing occupational asthma. | | | |
| | | STEL | 0.05 ppm<br>0.2 mg/m3 | GB EH40 |
| | Further information: Capable of causing occupational asthma. | | | |
| ethanol | 64-17-5 | TWA | 1,000 ppm<br>1,920 mg/m3 | GB EH40 |

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

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|---|---|---|---|---|
| glutaral | Workers | Inhalation | Long-term local effects | 0.0106 mg/m3 |
| ethanol | Workers | Inhalation | Acute local effects | 1900 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 343 mg/kg |
| | Workers | Inhalation | Long-term systemic | 950 mg/m3 |

| | | | | |
|---|---|---|---|---|
| | | | effects | |
| pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate | Workers | Inhalation | Acute local effects | 3 mg/m3 |
| | Workers | Inhalation | Long-term local effects | 1.5 mg/m3 |

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

| Substance name | Environmental Compartment | Value |
|---|---|---|
| glutaral | Fresh water | 0.0025 mg/l |
| | Marine water | 0.00025 mg/l |
| | Fresh water sediment | 0.091 mg/kg |
| | Marine sediment | 0.009 mg/kg |
| | Soil | 0.18 mg/kg |
| | Effects on waste water treatment plants | 0.8 mg/l |
| | Intermittent use/release | 0.006 mg/l |
| ethanol | Fresh water | 0.96 mg/l |
| | Marine water | 0.79 mg/l |
| | Fresh water sediment | 3.6 mg/kg |
| | Soil | 0.63 mg/kg |
| | Marine sediment | 2.9 mg/kg |
| | Sewage treatment plant | 580 mg/l |
| pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate | Fresh water | 6.4 mg/l |
| | Marine water | 0.64 mg/l |
| | Intermittent use/release | 3.1 mg/l |
| | Sewage treatment plant | 51 mg/l |
| | Fresh water sediment | 23 mg/kg |
| | Marine sediment | 2.3 mg/kg |
| | Soil | 0.853 mg/kg |

### 8.2 Exposure controls

**Personal protective equipment**

Eye/face protection : Face-shield

Hand protection

Directive : The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Remarks : Splash protection: disposable nitrile rubber gloves e.g. Dermatril (layer thickness: 0.11 mm) made by KCL or gloves from other manufacturers offering the same protection. Prolonged contact: Nitrile rubber gloves e.g. Camatril (>480 Min., layer thickness: 0,40 mm) or butyl rubber gloves e.g. Butoject (>480 Min., layer thickness: 0,70 mm) made by KCL or gloves from other manufacturers offering the same protection.

Skin and body protection : Work uniform or laboratory coat.

Respiratory protection : Not required; except in case of aerosol formation. Respirator with combination filter for vapour/particulate (EN 141)

| | | |
|---|---|---|
| Protective measures | : | Avoid contact with skin and eyes.<br>Do not breathe vapour. |

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | | |
|---|---|---|
| Appearance | : | liquid |
| Colour | : | colourless |
| Odour | : | stinging |
| Odour Threshold | : | not determined |
| pH | : | 3.6 (20 °C)<br>Concentration: 100 % |
| Melting point/freezing point | : | < -5 °C |
| Decomposition temperature | | No data available |
| Boiling point/boiling range | : | ca. 90 °C |
| Flash point | : | 63 °C<br>Method: DIN 51755 Part 1 |
| Evaporation rate | : | No data available |
| Upper explosion limit / Upper flammability limit | : | Not applicable |
| Lower explosion limit / Lower flammability limit | : | Not applicable |
| Vapour pressure | : | ca. 35 hPa (20 °C) |
| Relative vapour density | : | No data available |
| Density | : | ca. 1.04 g/cm3 (20 °C) |
| Solubility(ies) | | |
| Water solubility | : | completely soluble (20 °C) |
| Partition coefficient: n-octanol/water | : | Not applicable |
| Auto-ignition temperature | : | No data available |
| Viscosity | | |
| Viscosity, dynamic | : | ca. 3.2 mPa*s (20 °C)<br>Method: DIN 53019 |
| Viscosity, kinematic | : | not determined |
| Explosive properties | : | No data available |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |

### 9.2 Other information

| | | |
|---|---|---|
| Flammability (liquids) | : | does not ignite |
| Metal corrosion rate | : | Not corrosive to metals |
| Self-ignition | : | not determined |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

### 10.2 Chemical stability

The product is chemically stable.

### 10.3 Possibility of hazardous reactions

| | | |
|---|---|---|
| Hazardous reactions | : | None reasonably foreseeable. |

### 10.4 Conditions to avoid

| | | |
|---|---|---|
| Conditions to avoid | : | Protect from frost, heat and sunlight. |

### 10.5 Incompatible materials

| | | |
|---|---|---|
| Materials to avoid | : | Strong bases<br>Strong acids and oxidizing agents<br>Amines<br>Ammonia |

### 10.6 Hazardous decomposition products

None reasonably foreseeable.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity**

Harmful if swallowed or if inhaled.

**Product:**

| | | |
|---|---|---|
| Acute oral toxicity | : | Acute toxicity estimate: 385 mg/kg<br>Method: Calculation method |
| Acute inhalation toxicity | : | Acute toxicity estimate: 1.4 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Method: Calculation method |

**Components:**

**glutaral:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): 77 mg/kg<br>Assessment: Toxic if swallowed. |
| Acute inhalation toxicity | : | LC50 (Rat): 0.28 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Method: OECD Test Guideline 403 |
| Acute dermal toxicity | : | LD50 (Rabbit): > 2,000 mg/kg |

**ethanol:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): 10,470 mg/kg<br>Method: OECD Test Guideline 401 |
| Acute inhalation toxicity | : | LC50 (Rat, male and female): 124.7 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapour |
| Acute dermal toxicity | : | LD50 (Rabbit): > 2,000 mg/kg<br>Method: OECD Test Guideline 402 |

**pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): ca. 4,550 mg/kg |
| Acute inhalation toxicity | : | Acute toxicity estimate: 1 - 5 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Assessment: The component/mixture is moderately toxic after short term inhalation. |
| Acute dermal toxicity | : | LD50 (Rat): > 2,000 mg/kg<br>Method: OECD Test Guideline 402<br>Remarks: The toxicological data has been taken from products of similar composition. |

**Skin corrosion/irritation**

Causes severe burns.

**Components:**

**glutaral:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 404 |
| Result | : | Corrosive |

**ethanol:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | OECD Test Guideline 404 |
| Result | : | No skin irritation |

**pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate:**

| | | |
|---|---|---|
| Result | : | Skin irritation |

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Components:**

**glutaral:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Method | : | Draize Test |
| Result | : | Corrosive |

**ethanol:**

| | | |
|---|---|---|
| Method | : | OECD Test Guideline 405 |
| Result | : | Eye irritation |

**pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate:**

| | | |
|---|---|---|
| Result | : | Eye irritation |

**Respiratory or skin sensitisation**

**Skin sensitisation**

May cause an allergic skin reaction.

**Respiratory sensitisation**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Components:**

**glutaral:**

| | | |
|---|---|---|
| Test Type | : | Open epicutaneous test |
| Exposure routes | : | Dermal |
| Species | : | Guinea pig |
| Result | : | Causes sensitisation. |

| | | |
|---|---|---|
| Exposure routes | : | Inhalation |
| Species | : | Humans |
| Result | : | Causes sensitisation. |

**ethanol:**

| | | |
|---|---|---|
| Test Type | : | Maximisation Test |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | Did not cause sensitisation on laboratory animals. |

**pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate:**

| | | |
|---|---|---|
| Test Type | : | Buehler Test |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | Does not cause skin sensitisation. |

**Germ cell mutagenicity**

Not classified based on available information.

**Components:**

**glutaral:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Result: Conflicting results have been seen in different studies. |
| Germ cell mutagenicity- Assessment | : | Did not show mutagenic effects in animal experiments. |

**ethanol:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Microbial mutagenesis assay (Ames test)<br>Test system: Salmonella typhimurium<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 471<br>Result: Not mutagenic in Ames Test |
| Genotoxicity in vivo | : | Result: Non mutagenic |
| Germ cell mutagenicity- Assessment | : | Tests on bacterial or mammalian cell cultures did not show mutagenic effects. |

**pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Microbial mutagenesis assay (Ames test)<br>Test system: Salmonella typhimurium<br>Method: OECD Test Guideline 471<br>Result: negative<br>Remarks: In vitro tests did not show mutagenic effects |

**Carcinogenicity**

Not classified based on available information.

**Components:**

**glutaral:**

| | | |
|---|---|---|
| Carcinogenicity - Assessment | : | Animal testing did not show any carcinogenic effects. |

**ethanol:**

| | | |
|---|---|---|
| Carcinogenicity - Assessment | : | Did not show carcinogenic effects in animal experiments. |

**Reproductive toxicity**

Not classified based on available information.

**Components:**

**glutaral:**

| | | |
|---|---|---|
| Reproductive toxicity - Assessment | : | Animal testing did not show any effects on fertility. |

**ethanol:**

| | | |
|---|---|---|
| Effects on foetal development | : | Species: Rat<br>Application Route: Oral |

| | | |
|---|---|---|
| | | General Toxicity Maternal: NOAEL: 5,200 mg/kg bw/day<br>Developmental Toxicity: NOAEL: 5,200 mg/kg bw/day |
| Reproductive toxicity - Assessment | : | Animal experiments showed mutagenic and teratogenic effects. |

**pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate:**

| | | |
|---|---|---|
| Effects on foetal development | : | Species: Rat<br>Application Route: Oral<br>General Toxicity Maternal: NOAEL: 400 mg/kg bw/day<br>Teratogenicity: NOAEL: 100 mg/kg bw/day<br>Method: OECD Test Guideline 414<br>GLP: yes |
| Reproductive toxicity - Assessment | : | May damage the unborn child. |

**STOT - single exposure**

May cause respiratory irritation.
Corrosive to the respiratory tract.

**Product:**

| | | |
|---|---|---|
| Remarks | : | May cause respiratory irritation. |

**Components:**

**glutaral:**

| | | |
|---|---|---|
| Remarks | : | No data available |

**ethanol:**

| | | |
|---|---|---|
| Remarks | : | No data available |

**STOT - repeated exposure**

Not classified based on available information.

**Components:**

**glutaral:**

| | | |
|---|---|---|
| Exposure routes | : | Inhalation |
| Target Organs | : | Upper respiratory tract |

**ethanol:**

| | | |
|---|---|---|
| Remarks | : | No data available |

**pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate:**

| | | |
|---|---|---|
| Exposure routes | : | Inhalation |
| Target Organs | : | Respiratory system |
| Assessment | : | May cause damage to organs through prolonged or repeated exposure. |

**Repeated dose toxicity**

**Components:**

**glutaral:**

| | | |
|---|---|---|
| Remarks | : | No adverse effect has been observed in chronic toxicity tests. |

**ethanol:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 1,730 mg/kg |
| LOAEL | : | 3,160 mg/kg |
| Application Route | : | Oral |
| Exposure time | : | 90 d |

**Aspiration toxicity**

Not classified based on available information.

**Further information**

**Product:**

| | | |
|---|---|---|
| Remarks | : | No data is available on the product itself. |

## SECTION 12: Ecological information

### 12.1 Toxicity

**Product:**

| | | |
|---|---|---|
| Toxicity to microorganisms | : | EC50 : 217 mg/l<br>Method: OECD 209 |

**Components:**

**glutaral:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Lepomis macrochirus (Bluegill sunfish)): 9.4 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 5.75 mg/l<br>Exposure time: 48 h |
| Toxicity to algae/aquatic plants | : | EC50 (Desmodesmus subspicatus (green algae)): 0.6 mg/l<br>Exposure time: 72 h<br>Test Type: static test<br>Method: OECD Test Guideline 201<br><br>NOEC (Desmodesmus subspicatus (green algae)): 0.025 mg/l<br>Exposure time: 72 h<br>Test Type: static test<br>Method: OECD Test Guideline 201 |
| M-Factor (Acute aquatic toxicity) | : | 1 |

| | | |
|---|---|---|
| Toxicity to fish (Chronic toxicity) | : | NOEC: 1.6 mg/l<br>Exposure time: 97 d<br>Species: Oncorhynchus mykiss (rainbow trout) |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 2.5 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea) |

**ethanol:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Leuciscus idus (Golden orfe)): 8,140 mg/l<br>Exposure time: 48 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 5,000 mg/l<br>Exposure time: 48 h |
| Toxicity to algae/aquatic plants | : | EC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |

**pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate:**

| | | |
|---|---|---|
| Toxicity to fish | : | NOEC (Oncorhynchus mykiss (rainbow trout)): 1,000 mg/l<br>Exposure time: 96 h<br>Test Type: semi-static test<br>Method: OECD Test Guideline 203<br>Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia (water flea)): 245 mg/l<br>Exposure time: 48 h<br>Test Type: static test<br>Method: OECD Test Guideline 202<br>Remarks: Based on data from similar materials |
| Toxicity to algae/aquatic plants | : | NOEC (Scenedesmus quadricauda (Green algae)): 400 mg/l<br>Exposure time: 23 d<br>Test Type: static test<br>Remarks: Based on data from similar materials |
| Toxicity to fish (Chronic toxicity) | : | NOEC: 100 mg/l<br>Exposure time: 28 d<br>Species: Fish<br>Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 67 mg/l<br>Exposure time: 18 d<br>Species: Daphnia (water flea)<br>Method: OECD Test Guideline 211<br>Remarks: Based on data from similar materials |

### 12.2 Persistence and degradability

**Product:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Method: OECD 301D / EEC 84/449 C6 |

**Components:**

**glutaral:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 90 - 100 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301A |
| Stability in water | : | pH: 7<br>Hydrolysis: at 50 °C(> 1 yr)<br>Remarks: Hydrolyses slowly on contact with water. |

**ethanol:**

| | | |
|---|---|---|
| Biodegradability | : | Test Type: aerobic<br>Result: Readily biodegradable.<br>Biodegradation: > 70 %<br>Exposure time: 5 d<br>Method: OECD 301D / EEC 84/449 C6 |

**pentasodium (carboxylatomethyl)iminobis(ethylenenitrilo)tetraacetate:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Not readily biodegradable.<br>Remarks: Not readily eliminated from water.<br>Based on data from similar materials |

**12.3 Bioaccumulative potential**

**Components:**

**glutaral:**

| | | |
|---|---|---|
| Bioaccumulation | : | Remarks: Does not bioaccumulate.<br>Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected. |
| Partition coefficient: n-octanol/water | : | log Pow: ca. -0.36 (23 °C)<br>pH: 7<br>Method: Directive 92/69/EEC, A.8 |

**ethanol:**

| | | |
|---|---|---|
| Bioaccumulation | : | Remarks: Bioaccumulation is unlikely. |
| Partition coefficient: n-octanol/water | : | log Pow: -0.14<br>Method: Calculated value |

**12.4 Mobility in soil**

**Components:**

**glutaral:**

| | | |
|---|---|---|
| Mobility | : | Remarks: Mobile in soils |

**ethanol:**

| | | |
|---|---|---|
| Mobility | : | Remarks: No data available |

### 12.5 Results of PBT and vPvB assessment

**Product:**

| | | |
|---|---|---|
| Assessment | : | This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. |

### 12.6 Other adverse effects

**Product:**

| | | |
|---|---|---|
| Endocrine disrupting potential | : | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |
| Additional ecological information | : | No data is available on the product itself. |

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

| | | |
|---|---|---|
| Product | : | Disposal together with normal waste is not allowed. Special disposal required according to local regulations. |
| Contaminated packaging | : | Empty containers should be taken to an approved waste handling site for recycling or disposal. |

## SECTION 14: Transport information

### 14.1 UN number

| | | |
|---|---|---|
| **ADR** | : | UN 1903 |
| **IMDG** | : | UN 1903 |
| **IATA** | : | UN 1903 |

### 14.2 UN proper shipping name

| | | |
|---|---|---|
| **ADR** | : | DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (glutaral) |
| **IMDG** | : | DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (glutaral) |
| **IATA** | : | Disinfectant, liquid, corrosive, n.o.s. (glutaral) |

### 14.3 Transport hazard class(es)

| | | Class | Subsidiary risks |
|---|---|---|---|
| **ADR** | : | 8 | |
| **IMDG** | : | 8 | |
| **IATA** | : | 8 | |

**14.4 Packing group**

**ADR**

| | | |
|---|---|---|
| Packing group | : | III |
| Classification Code | : | C9 |
| Hazard Identification Number | : | 80 |
| Labels | : | 8 |
| Tunnel restriction code | : | (E) |

**IMDG**

| | | |
|---|---|---|
| Packing group | : | III |
| Labels | : | 8 |
| EmS Code | : | F-A, S-B |

**IATA (Cargo)**

| | | |
|---|---|---|
| Packing instruction (cargo aircraft) | : | 856 |
| Packing instruction (LQ) | : | Y841 |
| Packing group | : | III |
| Labels | : | Corrosive |

**IATA (Passenger)**

| | | |
|---|---|---|
| Packing instruction (passenger aircraft) | : | 852 |
| Packing instruction (LQ) | : | Y841 |
| Packing group | : | III |
| Labels | : | Corrosive |

**14.5 Environmental hazards**

**ADR**

| | | |
|---|---|---|
| Environmentally hazardous | : | no |

**IMDG**

| | | |
|---|---|---|
| Marine pollutant | : | no |

**14.6 Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable for product as supplied.

## SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

| | | |
|---|---|---|
| UK REACH List of restrictions (Annex 17) | : | Conditions of restriction for the following entries should be considered: Number on list 3 |
| UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation | : | Not applicable |
| The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain) | : | Not applicable |
| Regulation (EC) No 1005/2009 on substances that deplete the ozone layer | : | Not applicable |
| UK REACH List of substances subject to authorisation (Annex XIV) | : | Not applicable |

| | | |
|---|---|---|
| Volatile organic compounds | : | Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)<br>Volatile organic compounds (VOC) content: 4.66 % |

**Other regulations:**

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to new and expectant mothers at work contained in Regulation 16 to 18) and of the Pregnant Workers Directive 92/85/EEC.
Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to protection of young people at work contained in Regulation 19) and of Directive 94/33/EC on the protection of young people at work.

**The components of this product are reported in the following inventories:**

| | | |
|---|---|---|
| TCSI | : | On the inventory, or in compliance with the inventory |
| TSCA | : | All substances listed as active on the TSCA inventory |
| AIIC | : | All components are listed on the inventory, regulatory obligations/restrictions apply |
| DSL | : | All components of this product are on the Canadian DSL |
| ENCS | : | On the inventory, or in compliance with the inventory |
| ISHL | : | On the inventory, or in compliance with the inventory |
| KECI | : | On the inventory, or in compliance with the inventory |
| PICCS | : | On the inventory, or in compliance with the inventory |
| IECSC | : | On the inventory, or in compliance with the inventory |
| NZIoC | : | Not in compliance with the inventory |
| TECI | : | Not in compliance with the inventory |

**15.2 Chemical safety assessment**

No Chemical Safety Assessment has been carried out for this mixture.

## SECTION 16: Other information

**Full text of H-Statements**

| | | |
|---|---|---|
| H225 | : | Highly flammable liquid and vapour. |
| H301 | : | Toxic if swallowed. |
| 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. |
| H330 | : | Fatal if inhaled. |
| H332 | : | Harmful if inhaled. |
| H334 | : | May cause allergy or asthma symptoms or breathing difficulties 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 if inhaled. |
| H400 | : | Very toxic to aquatic life. |
| H411 | : | Toxic to aquatic life with long lasting effects. |

**Full text of other abbreviations**

| | | |
|---|---|---|
| Acute Tox. | : | Acute toxicity |
| Aquatic Acute | : | Short-term (acute) aquatic hazard |
| Aquatic Chronic | : | Long-term (chronic) aquatic hazard |
| Eye Dam. | : | Serious eye damage |
| Eye Irrit. | : | Eye irritation |
| Flam. Liq. | : | Flammable liquids |
| Repr. | : | Reproductive toxicity |
| Resp. Sens. | : | Respiratory sensitisation |
| Skin Corr. | : | Skin corrosion |
| Skin Irrit. | : | Skin irritation |
| Skin Sens. | : | Skin sensitisation |
| STOT RE | : | Specific target organ toxicity - repeated exposure |
| STOT SE | : | Specific target organ toxicity - single exposure |
| GB EH40 | : | UK. EH40 WEL - Workplace Exposure Limits |
| GB EH40 / TWA | : | Long-term exposure limit (8-hour TWA reference period) |
| GB EH40 / STEL | : | Short-term exposure limit (15-minute reference period) |

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL

- Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

**Further information**

| **Classification of the mixture:** | | **Classification procedure:** |
|---|---|---|
| Acute Tox. 4 | H302 | Calculation method |
| Acute Tox. 4 | H332 | Calculation method |
| Skin Corr. 1B | H314 | Calculation method |
| Eye Dam. 1 | H318 | Calculation method |
| Resp. Sens. 1 | H334 | Calculation method |
| Skin Sens. 1 | H317 | Calculation method |
| STOT SE 3 | H335 | Calculation method |
| Aquatic Chronic 3 | H412 | Calculation method |

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.