

# SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) Article 31, Annex II as amended

# SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

Product name: ORO CLEAN® Plus
UFI: KNYW-18UR-T00G-55P1

Substance type: Mixture
Use of the substance/mixture: Disinfectant

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

Identified uses: ORO CLEAN® Plus is a broad spectrum concentrate for the disinfection, cleaning

and deodorisation of dental suction units and spittoon bowls. ORO CLEAN® Plus removes bad odours and leaves behind a fresh peppermint scent. Perfect for daily

disinfection.

Uses advised against: Do not use for purposes other than those prescribed.

Recommended restrictions on

use:

For professional use only.

# 1.3 Details of the supplier of the safety data sheet

|            | Manufacturer  | EU only representative  |  |
|------------|---|---|--|
| Address:   | Oro Clean Chemie AG<br>Allmendstrasse 21<br>8320 Fehraltorf<br>Switzerland                    | Oro Clean Chemie s.r.o.<br>Vinohradská 2828/151<br>Žižkov<br>130 00 Praha 3<br>Czech Republic |  |
| Telephone: | +41 (0)44 226 44 44   |   |  |
| Email:     | info@oroclean.com   | info@oroclean.cz  |  |
| Website:   | www.oroclean.com  | www.oroclean.cz   |  |
|            | Downstream user/importer/di   | stributor   |  |
| Address:   | Oro Clean Chemie s.r.o.<br>Vinohradská 2828/151<br>Žižkov<br>130 00 Praha 3<br>Czech Republic |   |  |
| Telephone: |   |   |  |
| Email:     | info@oroclean.cz  |   |  |
| Website:   | www.oroclean.cz   |   |  |

# Person responsible for preparing the SDS

Lee Moi Wong | Research & Development | Chief Research Officer (CRO)

Telephone: +41 (0)44 226 44 44

Email: ra@oroclean.com

#### 1.4 Emergency telephone number

Emergency telephone number: 113 / +47 22 59 13 00

<sup>\*</sup> Please check the above numbers regularly as they might be subject to change.



# **SECTION 2: HAZARDS IDENTIFICATION**

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

| Hazard type          | Hazard category   | Hazard statement code(s) | Classification procedure           |
|----------------------|-------------------|--------------------------|------------------------------------|
| Physical hazard      | Met. Corr. 1      | H290                     | On basis of test data.             |
| Health hazard        | Skin Corr. 1C     | H314                     | On basis of test data.             |
| Health hazard        | Eye Dam. 1        | H318                     | Harmonised (legal) classification. |
| Environmental hazard | Aquatic Acute 1   | H400                     | Harmonised (legal) classification. |
| Environmental hazard | Aquatic Chronic 2 | H411                     | Harmonised (legal) classification. |

The full text for all H-statements is displayed in section 16.

# 2.2 Label elements

#### Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms:





| Signal word:              | Danger                |  |
|---------------------------|-----------------------|--|
| Hazard statements:        | H290<br>H314          | May be corrosive to metals.  Causes severe skin burns and eye damage.  |
|                           | H410                  | Very toxic to aquatic life with long lasting effects.  |
| Precautionary statements: | P280                  | Wear protective gloves/protective clothing/eye protection/face protection.   |
|                           | P301 + P330 +<br>P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.   |
|                           | P303 + P361 +<br>P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.                              |
|                           | P305 + P351 +<br>P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
|                           | P391                  | Collect spillage.  |
|                           | P501                  | Dispose of contents/container in accordance with local and national regulations.   |

#### 2.3 Other hazards

Supplemental information:

PBT or vPvB properties: 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.

Endocrine disrupting properties: 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.

Not applicable.

#### **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.1 Substances

See below.



#### 3.2 Mixtures

#### Classification according to Regulation (EC) No 1272/2008

| Substance name                                     | Identification  | Classification  | SCL, M-factor, ATE      | Concentration |
|--|---|---|-------------------------|---------------|
| Alkyl (C12-16) dimethylbenzyl ammonium chloride    | CAS no.: 68424-85-1<br>EC no.: 939-253-5<br>Index no.: No data available.<br>REACH no.: 01-2119965180-41-0000 | Acute Tox. 4, H302<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410<br>Eye Dam. 1, H318<br>Skin Corr. 1B, H314 | M = 10, M (chronic) = 1 | 5% - < 15%    |
| N-(3-Aminopropyl)-N-<br>dodecylpropane-1,3-diamine | CAS no.: 2372-82-9<br>EC no.: 219-145-8<br>Index no.: No data available.<br>REACH no.: 01-2119980592-29-0000  | Acute Tox. 3, H301<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410<br>Skin Corr. 1B, H314<br>STOT RE 2, H373  | M = 10                  | 1% - < 2.5%   |
| 2-Ethylhexanol ethoxylate                          | CAS no.: 26468-86-0<br>EC no.: 607-943-2<br>Index no.: Not applicable.<br>REACH no.: Not applicable.          | Eye Irrit. 2, H319  | No data available.      | 1% - < 2.5%   |

The full text for all H-statements is displayed in section 16.

#### **SECTION 4: FIRST AID MEASURES**

#### 4.1 Description of first aid measures

General notes: Never give anything by mouth to an unconscious person. Place patient in

recovery position and ensure airway patency. When in doubt or if feeling unwell seek medical assistance. Show the safety data sheet and label to the physician. No action shall be taken involving any personal risk or without suitable training. It

may be dangerous to the person providing aid to give mouth-to-mouth

resuscitation. When it is suspected, that there may still be harmful vapours/fumes present in the air, respiratory protection (mask; self contained breathing

apparatus) must be used. Wash contaminated clothing with water before

removing or use gloves.

After inhalation: Remove patient to fresh air - move out of dangerous area. In case of

unconsciousness bring patient into stable side position and seek medical attention. If breathing is irregular or respiratory arrest occurs provide artificial respiration. Keep at rest in a position comfortable for breathing. Seek medical

help immediately.

After contact with skin: Take off all contaminated clothing. Areas of the body that have come into contact

with the product must be rinsed with water. Immediately obtain professional

medical help.

After contact with eyes: Immediately flush eyes with running water, keeping eyelids apart. After 5 minutes

of rinsing, remove contact lenses, if present, and continue rinsing. Consult a

physician immediately.

After ingestion: Do not induce vomiting. Rinse mouth thoroughly with water. Never give anything

by mouth to an unconscious person. Immediately consult a doctor. Show the

physician the safety data sheet or label.

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

See section 11 for more detailed information on health effects and symptoms.

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

Treat symptomatically.



#### **SECTION 5: FIREFIGHTING MEASURES**

# 5.1 Extinguishing media

Suitable extinguishing media: Carbon dioxide. Dry chemical powder. Water spray. Alcohol resistant foam.

Unsuitable extinguishing media: Full water jet.

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

Specific hazards during

firefighting:

In case of a fire toxic gases can be generated; do not inhale gases/smoke.

in engrining.

Hazardous combustion products: No data available.

#### 5.3 Advice for firefighters

Special protective equipment for

firefighters:

Firefighters should wear appropriate protective clothing for firefighters (including helmets, protective boots and gloves) (BS EN 469) and self-contained breathing

apparatus (SCBA) with a full face-piece (BS EN 137).

Additional information: In case of fire or heating do not breathe fumes/vapours. No action shall be taken

involving any personal risk or without suitable training. Contaminated firefighting

water and fire residues must be disposed of in accordance with the local

regulations.

# **SECTION 6: ACCIDENTAL RELEASE MEASURES**

# 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency

personnel:

Use personal protective equipment (section 8). Ensure adequate ventilation. No action shall be taken involving any personal risk or without suitable training. Prevent access to unprotected personnel. Evacuate the danger zone. Do not

breathe vapour or mist. Avoid contact with skin, eyes and clothing.

Advice for emergency

responders:

Use personal protective equipment.

#### 6.2 Environmental precautions

Do not allow to enter drains or waterways. Prevent product from getting into subsoil/soil.

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

Stem the spill if this does not pose risks. Absorb product (with inert material), collect it in special container and dispose it to a licensed hazardous-waste disposal contractor. Prevent release into the sewer, water, basements or confined areas. Ventilate the premises. Clean contaminated area with plenty of water.

#### 6.4 Reference to other sections

See also sections 7, 8 and 13.

#### SECTION 7: HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

General advice: Use general or local exhaust ventilation to prevent inhaling vapours and aerosols.

Do not discharge into drains, surface water and soil. After use immediately close

container tightly.

Instructions for protection against 
Ensure adequate ventilation.



fire and explosion:

Advice on general occupational

hygiene:

Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Do not breathe vapours/mist. Avoid contact with skin, eyes and clothes. Remove contaminated clothes and wash them before reuse. Wear suitable protective equipment; see section 8.

# 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage room

and containers:

Close opened containers after use. Put the containers upright to prevent from

leaking. Do not store in unlabelled containers.

Further information about storage

conditions:

Keep in a cool, dry and well ventilated place. Keep away from food, drink and

animal feeding stuffs. Store only in original container.

Stocking with different products:

Store separately from beverages, food and feed. Store separately from strong acids, bases and oxidation agents.

#### 7.3 Specific end use(s)

See identified uses in section 1.

#### **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

# 8.1 Control parameters

#### Occupational exposure limits

Please refer to the latest edition of the appropriate source text and consult an industrial hygienist or similar professional, or local agencies, for further information.

#### **Biological limit values**

No biological exposure limits noted for the ingredient(s).

#### **DNEL values**

| Substance name  | Pattern of exposure                    | Route of exposure     | Limit value           |  |
|---|--|-----------------------|-----------------------|--|
| Alkyl (C12-16) dimethylbenzyl ammonium chloride<br>CAS no.:68424-85-1   | No threshold derived.                  | No threshold derived. | No threshold derived. |  |
| N-(3-Aminopropyl)-N-dodecylpropane-1,3-<br>diamine<br>CAS no.:2372-82-9 | Worker (long term, systemic effects)   | Inhalation            | 789 μg/m³             |  |
|   | Consumer (long term, systemic effects) | Inhalation            | 118 μg/m³             |  |
|   | Worker (long term, systemic effects)   | Dermal                | 8.96 mg/kg bw/day     |  |
|   | Consumer (long term, systemic effects) | Dermal                | 3.2 mg/kg bw/day      |  |
|   | Consumer (long term, systemic effects) | Oral                  | 40 μg/kg bw/day       |  |
| 2-Ethylhexanol ethoxylate<br>CAS no.:26468-86-0                         | No data available.                     | No data available.    | No data available.    |  |
| PNEC values   |  |                       |                       |  |
| Substance name  | Route of exposure                      | Limit value           |                       |  |
| Alkyl (C12-16) dimethylbenzyl ammon-<br>ium chloride                    | Fresh water                            | 420 ng/L              |                       |  |

| ium chloride<br>CAS no.:68424-85-1 | 1 Tooli Water                       | 720 Tg/L       |
|------------------------------------|-------------------------------------|----------------|
|                                    | Marine water                        | 96 ng/L        |
|                                    | Intermittent release (fresh water)  | 160 ng/L       |
|                                    | Intermittent release (marine water) | 207 ng/L       |
|                                    | Sewage treatment plant              | 160 μg/L       |
|                                    | Sediment (fresh water)              | 68 mg/kg dw    |
|                                    | Sediment (marine water)             | 15.75 mg/kg dw |
|                                    |                                     |                |

1.66 mg/kg dw

 $\begin{tabular}{lll} Soil & 1.66 m \\ N-(3-Aminopropyl)-N-dodecylpropane-1,3- & Fresh water & 1 $\mu g/L$ \\ \end{tabular}$ 

diamine

CAS no.:2372-82-9



 Marine water
 100 ng/L

 Intermittent release (fresh water)
 150 ng/L

 Sewage treatment plant
 180 μg/L

 Sediment (fresh water)
 3.2 mg/kg dw

 Sediment (marine water)
 130 μg/kg dw

 Soil
 45.34 mg/kg dw

2-Ethylhexanol ethoxylate No data available. No data available. CAS no.:26468-86-0

# 8.2 Exposure controls

#### Appropriate engineering controls

See section 7. No additional measures necessary.

Individual protection measures

Eye/face protection: Wear protective glasses during refilling and/or preparation of working solution and

during use.

Hand protection: Short-term contact: Gloves with Protection Index of at least Class 2 (Norm EN

374, permeation time > 30 min) for substances of Classes G and K. Long-term contact: Gloves with Protection Index of at least Class 6 (Norm EN 374, permeation time > 480 min) for substances of Classes G and K. (Class G:

amines; Class K: inorganic bases).

Body protection: Apron and work shoes or boots. Emergency responders should wear appropriate

body protection.

Respiratory protection: Avoid aerosol formation. Use respiratory protection if aerosol is formed.

Thermal hazards: No data available.

Hygiene measures: Use good personal hygiene practices – wash hands at breaks and when done

working with material. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothes. Do not eat, drink or

smoke while working. Do not breathe vapours/aerosols.

# **Environmental exposure controls**

Observe the usual precautions for handling chemicals. Do not empty concentrate into drains. Avoid releasing the concentrate to the environment.

# **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

# 9.1 Information on basic physical and chemical properties

Physical state: Liquid

Form: Clear, slightly viscous liquid

Colour: Yellow Odour: Aromatic

Melting point:

Freezing point:

No data available.

No data available.

No data available.

No data available.

and boiling range:

Flammability: The product is not flammable.

Lower explosion limit:

Upper explosion limit:

Flash point:

Auto-ignition temperature:

Decomposition temperature:

pH-value (undiluted product):

Not applicable.

Not self-igniting.

Not applicable.

10.0 - 12.0



pH-value (diluted product): 9.0 - 11.0 (2%)
Kinematic viscosity: No data available.

Solubility: Completely miscible with water.

Partition coefficient n- Not applicable.

octanol/water:

Vapour pressure at 50 °C: No data available.

Density: 1.02 g/cm<sup>3</sup>
Relative density: 1.02

Relative vapour density at 20 °C: No data available.

# 9.2 Other information

Oxidising properties: Not oxidising.

Explosive properties: Product is not explosive. Evaporation rate: No data available.

Miscibility: Completely miscible with water.

Other information: No data available.

#### **SECTION 10: STABILITY AND REACTIVITY**

#### 10.1 Reactivity

The mixture is not reactive.

# 10.2 Chemical stability

Stable at normal temperatures and pressure at least up to the expiry date printed on the container.

# 10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

#### 10.4 Conditions to avoid

Avoid conditions beyond those mentioned in section 7.

# 10.5 Incompatible materials

No specific materials to avoid during intended use.

#### 10.6 Hazardous decomposition products

No dangerous decomposition products occur under normal storage and use.

#### **SECTION 11: TOXICOLOGICAL INFORMATION**

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

#### Information on likely routes of exposure

Inhalation: Information on effects are given below.

Skin contact: Information on effects are given below.

Eye contact: Information on effects are given below.

Ingestion: Information on effects are given below.

**Acute toxicity** 



Mixture: ATEmix: LD50 (rat, ingestion) > 2000 mg/kg

Component: No data available.

Skin corrosion/irritation

Mixture: Causes burns.

Component: No data available.

Serious eye damage/irritation

Mixture: Causes serious eye damage.

Component: No data available.

Respiratory or skin sensitization

Mixture: The product is not classified as sensitising.

Component: No data available.

Germ cell mutagenicity

Mixture: Not a mutagen. Does not contain ingredients with known mutagenic properties.

Component: No data available.

Carcinogenicity

Mixture: Does not contain ingredients with known carcinogenic properties.

Component: No data available.

Reproductive toxicity

Mixture: This product contains no ingredients with known reproductive toxicity effects.

Component: No data available.

STOT-single exposure

Mixture: This product exhibits no known STOT-single exposure.

Component: No data available.

STOT-repeated exposure

Mixture: This product exhibits no known STOT-repeated exposure.

Component: No data available.

**Aspiration hazard** 

Mixture: This product exhibits no known aspiration hazard.

Component: No data available.

#### 11.2 Information on other hazards

## **Endocrine disrupting properties**

Mixture: 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.

Component: No data available.

Other hazards

Mixture: No data available. Component: No data available.



#### **SECTION 12: ECOLOGICAL INFORMATION**

# 12.1 Toxicity

The release of the diluted ready-to-use solution of this product is not expected to have any ecotoxic effects. The concentrated solution can have prolonged and widespread toxic effects on aquatic and terrestrial organisms. The release of concentrated solution may negatively affect the function of sewage treatment plants. There is no data available from ecotoxicological tests regarding the entire product. The ecotoxicological risk has been estimated based on available data on product ingredients and concentrations, where available.

# 12.2 Persistence and degradability

The product ingredients possess good biodegradation properties. The surfactants included in the product comply with the requirements for the biological decomposition of Regulation (EC) No. 648/2004 on detergents. Based on available data, the biodegradability in sewage treatment plants can be categorized as high. High product concentrations can affect the biodegradability potential of the activated sludge. Obtain the consent of the local authorities before discharging the concentrated solution to wastewater treatment plants.

| Substance name                                  | Biodegradation     | Basis            | Remark                 |
|---|--------------------|------------------|------------------------|
| Alkyl (C12-16) dimethylbenzyl ammonium chloride | Ca. 60%            | OECD 301 D, 28 D | Readily biodegradable. |
| N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine  | >70%               | OECD 301 D       | No data available.     |
| 2-Ethylhexanol ethoxylate                       | No data available. | OECD 301 B       | Readily biodegradable. |

# 12.3 Bioaccumulative potential

Mixture: Based on available data, no product ingredient is expected to exhibit

bioaccumulative potential.

Component: No data available.

# 12.4 Mobility in soil

Mixture: The product is not expected to be mobile over long distances because all product

ingredients possess good biodegradability. Surface tension and absorption / desorption kinetics are not relevant to the product. Because of possible aquatic toxicity, speedy decontamination measures must be taken if there is a danger of

large quantities entering the ground water or water systems.

Component: No data available.

#### 12.5 Results of PBT and vPvB 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 Endocrine disrupting properties

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.

#### 12.7 Other adverse effects

The product contains no ingredients with ozone depletion potential or global warming potential. The product contains no heavy metals or their compounds as defined in 2006/11/EG. The product contains no absorbable organic halogens (AOX) or volatile organic compounds (VOC).

#### SECTION 13: DISPOSAL CONSIDERATIONS



#### 13.1 Waste treatment methods

Disposal methods: Dispose of this product according to national and regional provisions. Waste code

EWC Nr: 070699 (Group: waste material of MFSU from fats, lubricants, soaps, detergents, disinfectants and personal protection products). The correctly diluted ready-to-use solution of this product can be disposed of via the sewage system. Small amounts of the product (up to about 100 ml per day) can be disposed of via

the sewage system after dilution 1:30 with tap water.

Contaminated packaging: Empty packaging can be treated like household waste or recycled after cleaning

with water. Handle the packaging containing the product in the same way as the product itself. Where available, references to local regulations regarding disposal

are given in section 15 of the SDS. The user has sole responsibility for

acquaintance and compliance with the applicable regulations.

#### **SECTION 14: TRANSPORT INFORMATION**

Land transport (ADR/ADN/RID)

#### 14.1 UN number

UN 1903

# 14.2 UN proper shipping name

DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (Alkyl (C12-16) dimethylbenzyl ammonium chloride, N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine)

#### 14.3 Transport hazard class(es)

8

# 14.4 Packing group

III | Danger label: 8 | LQ: 5 L

#### 14.5 Environmental hazards

Environmental hazards: Yes

#### 14.6 Special precautions for user

See sections 6 to 8.

Sea transport (IMDG/IMO)

# 14.1 UN number

UN 1903

# 14.2 UN proper shipping name

DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (Alkyl (C12-16) dimethylbenzyl ammonium chloride, N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine)

# 14.3 Transport hazard class(es)

8

# 14.4 Packing group

III | Danger label: 8 | LQ: 5 L



#### 14.5 Environmental hazards

Environmental hazards: Yes Marine pollutant: Yes

#### 14.6 Special precautions for user

See sections 6 to 8.

## 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

Air transport (IATA)

#### 14.1 UN number

UN 1903

# 14.2 UN proper shipping name

DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (Alkyl (C12-16) dimethylbenzyl ammonium chloride, N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine)

# 14.3 Transport hazard class(es)

8

# 14.4 Packing group

III | Danger label: 8 | LQ: 5 L

#### 14.5 Environmental hazards

Environmental hazards: Yes

# 14.6 Special precautions for user

See sections 6 to 8.

#### **SECTION 15: REGULATORY INFORMATION**

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

The product has been classified and marked in accordance with Regulation (EC) No.1272/2008 (CLP). The product complies with requirements of Regulation (EC) No. 1907/2006 (REACH), Regulation (EC) No. 648/2004 (Detergents Regulation), Regulation (EU) No. 528/2012 (Biocides Regulation), Directive 93/42/EC (Medical Devices Directive), and Regulation (EU) No. 2017/745 on medical devices (MDR), if applicable.

# 15.2 Chemical safety assessment

No chemical safety assessment was carried out for this product.

# **SECTION 16: OTHER INFORMATION**

#### Indication of changes

1.1 Product identifier - Updated.



- 1.2 Relevant identified uses of the substance or mixture and uses advised against Updated.
- 1.3 Details of the supplier of the safety data sheet Updated.
- 1.4 Emergency telephone number Updated.
- 4.1 Description of first aid measures Updated.
- 5.2 Special hazards arising from the substance or mixture Updated.
- 5.3 Advice for firefighters Updated.
- 6.1 Personal precautions, protective equipment and emergency procedures Updated.
- 6.2 Environmental precautions Updated.
- 7.1 Precautions for safe handling Updated.
- 7.2 Conditions for safe storage, including any incompatibilities Updated.
- 8.1 Control parameters Updated.
- 8.2 Exposure controls Updated.
- 9.1 Information on basic physical and chemical properties Updated.
- 9.2 Other information Updated.
- 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 / Information on toxicological effects Updated.
- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Updated.

#### Abbreviations and acronyms

- ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- ADR European Agreement concerning the International Carriage of Dangerous Goods by Road
- ASTM American Society for Testing and Materials
- AwSV Ordinance on facilities for handling substances that are hazardous to water
- BOD Biochemical Oxygen Demand
- c.c. Closed cup
- CAS Chemical Abstract Services
- CESIO European Committee of Organic Surfactants and their Intermediates
- COD Chemical Oxygen Demand
- DMEL Derived Minimum Effect Level
- DNEL Derived No Effect Level
- EbC50 Median concentration in terms of reduction of growth
- EC Effective concentration
- EINECS European Inventory of Existing Commercial Chemical Substances
- EN European Norm
- ErC50 Median concentration in terms of reduction of growth rate
- GGVSEB German ordinance for road, rail and inland waterway transportation of dangerous goods
- GGVSee German ordinance for sea transportation of dangerous goods
- GLP Good Laboratory Practice
- GMO Genetic Modified Organism
- IATA International Air Transport Association
- ICAO International Civil Aviation Organization
- IMDG International Maritime Dangerous Goods
- ISO International Organization For Standardization
- LD/LC Lethal dose/concentration
- LOAEL Lowest Observed Adverse Effect Level
- LQ Limited Quantity
- LOEL Lowest Observed Effect Level
- M-Factor Multiplying factor
- NOAEL No Observed Adverse Effect Level
- NOEC No Observed Effect Concentration
- NOEL No Observed Effect Level
- o.c. Open cup
- OECD Organisation for Economic Cooperation and Development
- OEL Occupational Exposure Limit
- PBT Persistent, bioaccumulative, toxic
- PNEC Predicted No Effect Concentration
- REACH REACH registration
- RID Convention concerning International Carriage by Rail



SVHC - Substances of Very High Concern

TA - Technical Instructions

TRGS - Technical Rules for Hazardous Substances

vPvB - Very persistent, very bioaccumulative

WGK - Water Hazard Class

# Key literature references and sources for data

No data available.

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

| Hazard category   | Hazard statement code(s) | Classification procedure           |
|-------------------|--------------------------|------------------------------------|
| Met. Corr. 1      | H290                     | On basis of test data.             |
| Skin Corr. 1C     | H314                     | On basis of test data.             |
| Eye Dam. 1        | H318                     | Harmonised (legal) classification. |
| Aquatic Acute 1   | H400                     | Harmonised (legal) classification. |
| Aquatic Chronic 2 | H411                     | Harmonised (legal) classification. |

# List of relevant phrases

| H290 May be corrosive to metals | H290 | May | be | corrosive | to | metals. |
|---------------------------------|------|-----|----|-----------|----|---------|
|---------------------------------|------|-----|----|-----------|----|---------|

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

#### **Training information**

Comply with national laws regulating employee instruction.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.