

Product: OROLIN® Burbath

# 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: OROLIN® Burbath  
UFI: QPXW-G88D-F001-VDQM  
Substance type: Mixture  
Use of the substance/mixture: Instrument disinfectant

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

Identified uses: OROLIN® Burbath is a ready-to-use solution for the disinfection of rotary instruments made of stainless steel, tungsten carbide, diamond grit, ceramic, polymer, and silicone.  
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

Address: United Disinfectant Manufacturers AG  
Dr. Grass-Strasse 12  
9490 Vaduz  
Liechtenstein  
Telephone: +423 237 15 03  
Email: info@udm.li  
Website: www.udm.li

#### Downstream user/importer/distributor

Address: United Disinfectant Manufacturers AG  
Dr. Grass-Strasse 12  
9490 Vaduz  
Liechtenstein  
Telephone: +423 237 15 03  
Email: info@udm.li  
Website: www.udm.li

#### Person responsible for preparing the SDS

Lee Moi Wong | Research & Development | Chief Research Officer (CRO)  
Telephone: +423 237 15 03  
Email: info@udm.li

### 1.4 Emergency telephone number

Emergency telephone number: 145 / +41 (0)44 251 51 51

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

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## 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	Flam. Liq. 3	H226	On basis of test data.
Health hazard	Skin Irrit. 2	H315	Harmonised (legal) classification.
Health hazard	Eye Irrit. 2	H319	Harmonised (legal) classification.
Health hazard	STOT SE 3	H336	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:



GHS02



GHS07

Signal word: Warning

Hazard statements:

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing fume/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501	Dispose of contents/container in accordance with local and national regulations.

Supplemental information: Not applicable.

### 2.3 Other hazards

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.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

See below.

Product: OROLIN® Burbath

## 3.2 Mixtures

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

Substance name	Identification	Classification	SCL, M-factor, ATE	Concentration
Propan-2-ol	CAS no.: 67-63-0 EC no.: 200-661-7 Index no.: 603-117-00-0 REACH no.: 01-2119457558-25-0000	Eye Irrit. 2, H319 Flam. Liq. 2, H225 STOT SE 3, H336	No data available.	30% - < 50%
Potassium hydroxide	CAS no.: 1310-58-3 EC no.: 215-181-3 Index no.: 019-002-00-8 REACH no.: 01-2119487136-33-0000	Acute Tox. 4, H302 Skin Corr. 1A, H314	Eye Irrit. 2, H319: 0.5 % ≤ C < 2 %; Skin Corr. 1A, H314: C ≥ 5 %; Skin Corr. 1B, H314: 2 % ≤ C < 5 %; Skin Irrit. 2, H315: 0.5 % ≤ C < 2 %	< 1%
Didecyltrimethylammonium chloride	CAS no.: 7173-51-5 EC no.: 230-525-2 Index no.: 612-131-00-6 REACH no.: 01-2119945987-15-0000	Acute Tox. 4, H302 Skin Corr. 1B, H314	No data available.	< 1%
2-Phenoxyethanol	CAS no.: 122-99-6 EC no.: 204-589-7 Index no.: 603-098-00-9 REACH no.: 01-2119488943-21-0000	Acute Tox. 4, H302 Eye Irrit. 2, H319	ATE (ingestion) = 1394 mg/kg bw (-)	< 1%

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.

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## 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.  
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. Prolonged heating can cause an explosion. Vapours can form explosive mixtures with air. Cool containers at risk with water spray. If possible remove containers from endangered area. 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. Keep away from sources of ignition and/or heat; No smoking. 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. Use only explosion-proof instruments and equipment. Use spark-proof tools. 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.

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Instructions for protection against fire and explosion:	Do not discharge into drains, surface water and soil. After use immediately close container tightly. Ensure adequate ventilation. Keep away from sources of ignition - no smoking. Use spark-proof tools. Take precautionary measures against static discharges. Vapours are heavier than air and spread along the floor. They form explosive mixtures with air.
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. Protect from open fire, heat and direct sunlight. Keep away from food, drink and animal feeding stuffs. Keep away from oxidising substances. Keep away from sources of ignition - no smoking. 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
Propan-2-ol CAS no.:67-63-0	Worker (short term, systemic effects)	Inhalation	1000 mg/m <sup>3</sup>
	Worker (long term, systemic effects)	Inhalation	500 mg/m <sup>3</sup>
	Consumer (short term, systemic effects)	Inhalation	178 mg/m <sup>3</sup>
	Consumer (long term, systemic effects)	Inhalation	89 mg/m <sup>3</sup>
	Worker (long term, systemic effects)	Dermal	888 mg/kg bw/day
	Consumer (long term, systemic effects)	Dermal	319 mg/kg bw/day
	Consumer (short term, systemic effects)	Oral	51 mg/kg bw/day
	Consumer (long term, systemic effects)	Oral	26 mg/kg bw/day
Potassium hydroxide CAS no.:1310-58-3	Worker (long term, local effects)	Inhalation	1 mg/m <sup>3</sup>
	Consumer (long term, local effects)	Inhalation	1 mg/m <sup>3</sup>
Didecyltrimethylammonium chloride CAS no.:7173-51-5	No threshold derived.	No threshold derived.	No threshold derived.
2-Phenoxyethanol CAS no.:122-99-6	Worker (long term, systemic effects)	Inhalation	5.7 mg/m <sup>3</sup>
	Worker (long term, local effects)	Inhalation	5.7 mg/m <sup>3</sup>
	Consumer (long term, systemic effects)	Inhalation	2.41 mg/m <sup>3</sup>
	Consumer (long term, local effects)	Inhalation	2.41 mg/m <sup>3</sup>
	Worker (long term, systemic effects)	Dermal	20.83 mg/kg bw/day

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	Consumer (long term, systemic effects)	Dermal	10.42 mg/kg bw/day
	Consumer (short term, systemic effects)	Oral	9.23 mg/kg bw/day
	Consumer (long term, systemic effects)	Oral	9.23 mg/kg bw/day
<b>PNEC values</b>			
Substance name	Route of exposure	Limit value	
Propan-2-ol CAS no.:67-63-0	No data available.	No data available.	
Potassium hydroxide CAS no.:1310-58-3	No data available.	No data available.	
Didecylidimethylammonium chloride CAS no.:7173-51-5	Fresh water	1.1 µg/L	
	Marine water	110 ng/L	
	Intermittent release (fresh water)	210 ng/L	
	Intermittent release (marine water)	21 ng/L	
	Sewage treatment plant	140 µg/L	
	Sediment (fresh water)	61.86 mg/kg dw	
	Sediment (marine water)	6.186 mg/kg dw	
	Soil	1.4 mg/kg dw	
2-Phenoxyethanol CAS no.:122-99-6	Fresh water	943 µg/L	
	Marine water	94.3 µg/L	
	Intermittent release (fresh water)	3.44 mg/L	
	Intermittent release (marine water)	723.7 µg/kg dw	
	Sewage treatment plant	36 mg/L	
	Sediment (fresh water)	7.237 mg/kg dw	
	Soil	1.31 mg/kg dw	

## 8.2 Exposure controls

### Appropriate engineering controls

See section 7. No additional measures necessary.

### Individual protection measures

Eye/face protection:	Wear tightly fitting safety goggles or protective face shield (EN 166).
Hand protection:	Short-term contact: Gloves with Protection Index of at least Class 2 (EN 374, permeation time > 30 min) for substances of Classes A and K. Long-term contact: Gloves with Protection Index of at least Class 6 (EN 374, permeation time > 480 min) for substances of Classes A and K. (Class A: primary alcohols; Class K: inorganic bases).
Body protection:	Apron and work shoes or boots. Emergency responders should wear appropriate body protection.
Respiratory protection:	Do not inhale gas/vapours/aerosol.
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.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Form:	Clear, non-viscous liquid
Colour:	Colourless to slightly yellow

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Odour:	Of alcohol
Melting point:	No data available.
Freezing point:	No data available.
Boiling point or initial boiling point and boiling range:	No data available.
Flammability:	The product is flammable.
Lower explosion limit:	No data available.
Upper explosion limit:	No data available.
Flash point:	23 °C
Auto-ignition temperature:	Not self-igniting.
Decomposition temperature:	Not applicable.
pH-value (undiluted product):	13.0 - 14.0
pH-value (diluted product):	Not applicable (ready-to-use solution).
Kinematic viscosity:	No data available.
Solubility:	Completely miscible with water.
Partition coefficient n-octanol/water:	Not applicable.
Vapour pressure at 50 °C:	No data available.
Density:	0.96 g/cm <sup>3</sup>
Relative density:	0.96
Relative vapour density at 20 °C:	No data available.

## 9.2 Other information

Oxidising properties:	Not oxidising.
Explosive properties:	Vapours can form explosive mixtures with air.
Evaporation rate:	No data available.
Miscibility:	Completely miscible with water.
Other information:	No data available.

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## SECTION 10: STABILITY AND REACTIVITY

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### 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. Contact with open flame may cause ignition.

### 10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

### 10.4 Conditions to avoid

Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to intense heat. Avoid conditions beyond those mentioned in section 7.

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## 10.5 Incompatible materials

Avoid contact with materials sensitive to alcohols and bases. Avoid contact with unhardened steel and sensitive non-ferrous metals.

## 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) > 5000 mg/kg
Component:	No data available.

### Skin corrosion/irritation

Mixture:	Irritating to skin.
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.



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## 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 amounts present in our packaging is not expected to have any ecotoxic effects. The release of several packages of this product can have temporary and localized toxic effects on aquatic and terrestrial organisms. This product is not expected to 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
Propan-2-ol	95%	21 D	Readily biodegradable.
Potassium hydroxide	Not applicable.	Not applicable.	Not applicable.
Didecylidimethylammonium chloride	Ca. 60%	OECD 301 D	Readily biodegradable.
2-Phenoxyethanol	90 - 100%	OECD 301 A, 15 D	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 most of the product ingredients possess good biodegradability. The remaining ingredients (e.g. mineral salts) are absorbed into the soil without negative ecological effects. This product reduces the surface tension of water.

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.

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## 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). The product contains volatile organic compounds (VOC).

# SECTION 13: DISPOSAL CONSIDERATIONS

## 13.1 Waste treatment methods

Disposal methods:	Dispose of 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). Small amounts of the product (up to about 500 ml per day) can be disposed of via the sewage system after dilution 1:5 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 2924

## 14.2 UN proper shipping name

FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Propan-2-ol, Potassium hydroxide)

## 14.3 Transport hazard class(es)

3

## 14.4 Packing group

III | Danger label: 3 + 8 | LQ: 5 L

## 14.5 Environmental hazards

Environmental hazards: No

## 14.6 Special precautions for user

See sections 6 to 8.

Sea transport (IMDG/IMO)

## 14.1 UN number

UN 2924

Product: OROLIN® Burbath

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**14.2 UN proper shipping name**

FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Propan-2-ol, Potassium hydroxide)

**14.3 Transport hazard class(es)**

3

**14.4 Packing group**

III | Danger label: 3 + 8 | LQ: 5 L

**14.5 Environmental hazards**

Environmental hazards: No

Marine pollutant: No

**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 2924

**14.2 UN proper shipping name**

FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Propan-2-ol, Potassium hydroxide)

**14.3 Transport hazard class(es)**

3

**14.4 Packing group**

III | Danger label: 3 + 8 | LQ: 5 L

**14.5 Environmental hazards**

Environmental hazards: No

**14.6 Special precautions for user**

See sections 6 to 8.

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**SECTION 15: REGULATORY INFORMATION**

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**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.

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## 15.2 Chemical safety assessment

No chemical safety assessment was carried out for this product.

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## SECTION 16: OTHER INFORMATION

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### Indication of changes

- 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.
- 8.2 Exposure controls - 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  
LOEL - Lowest Observed Effect Level  
LQ - Limited Quantity  
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

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## 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
Flam. Liq. 3	H226	On basis of test data.
Skin Irrit. 2	H315	Harmonised (legal) classification.
Eye Irrit. 2	H319	Harmonised (legal) classification.
STOT SE 3	H336	Harmonised (legal) classification.

## List of relevant phrases

H225 Highly flammable liquid and vapour.  
H226 Flammable liquid and vapour.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.

## 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.