

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 15.11.2023

Version number 10 (replaces version 9)

Revision: 15.11.2023

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

· **1.1 Product identifier**

· **Product name:** Verification Standard 610 nm

· **Catalog number:** 215656, 215670(610 nm), 215640(610 nm), 215650(610 nm), 215680(610 nm)

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

· **Application of the substance / the preparation:** Coloured Standard Solution for calibration purposes

· **1.3 Details of the supplier of the safety data sheet**

· **Supplier:**

Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com

phone: +49 (0)231 94510-0
e-mail: sales@lovibond.com

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom

phone : +44 1980 664800
e-mail: SDS@lovibond.uk

· **Informing department:**

e-mail: sds@lovibond.com
Product Safety Department

· **1.4 Emergency telephone number:**

+44 1235 239670
Languages: English

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

· **Hazard pictograms**



GHS02

· **Signal word** Warning

· **Hazard statements**

H226 Flammable liquid and vapour.

· **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 Wear protective gloves / eye protection.

P233 Keep container tightly closed.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

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P403+P235 Store in a well-ventilated place. Keep cool.

2.3 Other hazards

Vapours have anaesthetic effect.

At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.

Vapours of the product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

Determination of endocrine-disrupting properties

 For substances with endocrine disrupting properties see section 11.2

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: aqueous solution

Dangerous components:

CAS: 67-63-0 EINECS: 200-661-7 Index No: 603-117-00-0 Reg.nr.: 01-2119457558-25-XXXX	propan-2-ol ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	5–<10%
CAS: 9036-19-5 EINECS: 264-520-1	Octylphenol polyethoxyethanol ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=1); ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315	0.025–≤0.1%
CAS: 67-68-5 EINECS: 200-664-3	dimethyl sulfoxide	0.1–1%

Additional information For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Instantly remove any clothing soiled by the product.

After inhalation Supply fresh air; consult doctor in case of symptoms.

After skin contact Instantly wash with water and soap and rinse thoroughly.

After eye contact

Rinse opened eye for several minutes under running water (at least 15 min). If symptoms persist, consult doctor.

After swallowing

Rinse out mouth and then drink 1-2 glasses of water.

Seek medical treatment.

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

irritations

after inhalation:

drowsiness

coughing

breathing difficulty

dizziness

after absorption:

headache

fatigue

sickness

vomiting

Danger Condition may deteriorate with alcohol consumption.

4.3 Indication of any immediate medical attention and special treatment needed: No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents

CO₂, extinguishing powder or water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.
For safety reasons unsuitable extinguishing agents Water with a full water jet.

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- **5.2 Special hazards arising from the substance or mixture**
 - Can form explosive gas-air mixtures.
 - combustible
 - Formation of toxic gases is possible during heating or in case of fire.
 - Can be released in case of fire:
 - Carbon monoxide (CO) and carbon dioxide (CO₂)
 - **5.3 Advice for firefighters**
 - **Protective equipment:**
 - Wear self-contained breathing apparatus.
 - Wear full protective suit.
 - **Additional information**
 - Collect contaminated fire fighting water separately. It must not enter drains.
 - Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
 - Ambient fire may liberate hazardous vapours.
-

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
 - **Advice for non-emergency personnel:**
 - Wear protective equipment. Keep unprotected persons away.
 - Avoid substance contact.
 - Ensure adequate ventilation
 - **Advice for emergency responders:** Protective equipment: see section 8
 - **6.2 Environmental precautions:**
 - Do not allow product to reach sewage system or water bodies.
 - Prevent material from reaching sewage system, holes and cellars.
 - Damp down gases/fumes/haze with water spray jet.
 - **6.3 Methods and material for containment and cleaning up:**
 - Ensure adequate ventilation.
 - Absorb with liquid-binding material (sand, diatomite, universal binders).
 - Dispose of contaminated material as waste according to item 13.
 - **6.4 Reference to other sections**
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for information on disposal.
-

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
- **Advice on safe handling:**
 - Use only in well ventilated areas.
 - Protect from heat.
 - Keep ignition sources away - Do not smoke.
- **Hygiene measures:**
 - Do not inhale gases / fumes / aerosols.
 - Avoid contact with the skin.
 - Take off immediately all contaminated clothing.
 - Wash hands during breaks and at the end of the work.
 - Do not eat, drink or smoke when using this product.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and containers:**
 - Store only in unopened original containers.
 - Do not use light alloy containers.
- **Information about storage in one common storage facility:**
 - Store away from oxidising agents.
 - see chapter 10
- **Further information about storage conditions:**
 - Protect from frost.
 - Store in cool, dry conditions in well sealed containers.
 - Protect from heat and direct sunlight.
 - Store in the dark.
 - Protect from the effects of light.
 - Protect from humidity and keep away from water.

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- **Recommended storage temperature:** 20°C +/- 5°C
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Components with limit values that require monitoring at the workplace:

CAS: 67-63-0 propan-2-ol

WEL (Great Britain)	Short-term value: 1250 mg/m ³ , 500 ppm Long-term value: 999 mg/m ³ , 400 ppm
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· Regulatory information WEL (Great Britain): EH40/2020

· DNELs

Derived No Effect Level (DNEL)

CAS: 67-63-0 propan-2-ol

Oral	DNEL	26 mg/kg (Consumer / long-term / systemic effects)
Dermal	DNEL	888 mg/kg (Worker / long-term /systemic effects)
		319 mg/kg (Consumer / long-term / systemic effects)
Inhalative	DNEL	500 mg/m ³ (Worker / long-term /systemic effects)
		89 mg/m ³ (Consumer / long-term / systemic effects)

· Recommended monitoring procedures:

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

· PNECs

Predicted No Effect Concentration (PNEC)

CAS: 67-63-0 propan-2-ol

PNEC	140.9 mg/l (Marine water)
	140.9 mg/l (Fresh water)
PNEC	28 mg/kg (Soil)
	552 mg/kg (Marine sediment)
	552 mg/kg (Fresh water sediment)

· **Additional information:** The lists that were valid during the compilation were used as basis.

· 8.2 Exposure controls

· Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.

· Individual protection measures, such as personal protective equipment

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.

· Eye/face protection

Wear safety glasses in case of breakage / leakage.

· Hand protection

Avoid direct contact with the product/ the mixture by corresponding measures.

Wear gloves in case of breakage / leakage.

After use of gloves apply skin-cleaning agents and skin cosmetics.

· Material of gloves

Chloroprene rubber, CR

Recommended thickness of the material: ≥ 0.5 mm

· Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· As protection from splashes gloves made of the following materials are suitable:

nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Value for the permeation: Level = 1 (< 10 min)

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Other skin protection (body protection):

Protective work clothing.

· Breathing equipment:

Use breathing protection against the effects of fumes/dust/aerosol.

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— GB —

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- **Recommended filter device for short term use:** Filter A
- **Environmental exposure controls** Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **Physical state** Fluid
- **Form:** Solution
- **Colour:** Blue
- **Odour:** Solvent-like
- **Odour threshold:** CAS 67-63-0: 1.0-196.1 ppm (Merck)
- **Melting point/Freezing point:** Not determined.
- **Boiling point or initial boiling point and boiling range** 82°C (CAS: 67-63-0 propan-2-ol)
- **Flammability** Flammable liquid and vapour.
- **Explosive properties:** Product is not explosive. However, formation of explosive air/steam mixtures is possible.
- **Lower and upper explosion limit**
- **Lower:** 2 Vol % (CAS: 67-63-0 propan-2-ol)
- **Upper:** 13.4 Vol % (CAS: 67-63-0 propan-2-ol)
- **Flash point:** 39.5°C (DIN EN IS 2719/A)
- **Auto-ignition temperature:** 425°C (CAS: 67-63-0 propan-2-ol)
- **Decomposition temperature:** Not determined.
- **pH at 20°C** 7.3
- **Kinematic viscosity** Not determined.
- **Solubility**
- **Water:** Fully miscible
- **Partition coefficient n-octanol/water (log value)** Not applicable (mixture).
- **Vapour pressure:** Not determined.
- **Density and/or relative density**
- **Density at 20°C:** 0.98 g/cm³
- **Relative density:** Not determined.
- **Relative gas density** Not determined.
- **Particle characteristics** Not applicable (liquid).

· 9.2 Other information

- **Information with regard to physical hazard classes**
- **Corrosive to metals** Void
- **Other safety characteristics**
- **Oxidising properties:** none
- **Additional information**
- **Solids content:** < 1 %
- **Solvent content:**
- **Organic solvents:** < 10 %
- **Water:** > 90 %

SECTION 10: Stability and reactivity

- **10.1 Reactivity** Fumes can combine with air to form an explosive mixture.
- **10.2 Chemical stability** Stable at ambient temperature (room temperature).
- **10.3 Possibility of hazardous reactions**
- Reacts with alkaline metals
- Reacts with alkaline earth metals
- Exothermic reaction with acids
- **10.4 Conditions to avoid** Heating.
- **10.5 Incompatible materials:**
- metals
- light metals
- rubber
- various plastics

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 · **10.6 Hazardous decomposition products:** see section 5

SECTION 11: Toxicological information

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

 · **Acute toxicity** Based on available data, the classification criteria are not met.

 · **LD/LC50 values that are relevant for classification:**
CAS: 67-63-0 propan-2-ol

Oral	LD50	5045 mg/kg (rat) (RTECS)
	LDLo	3570 mg/kg (human) (RTECS)
Dermal	LD50	12800 mg/kg (rabbit) (RTECS)
Inhalative	LC50/4h	37.5 mg/l (rat) (OECD 403, vapour)

CAS: 9036-19-5 Octylphenol polyethoxyethanol

Oral	LD50	1900–5000 mg/kg (rat)
Dermal	LD50	>3000 mg/kg (rabbit)

 · **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

 · **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

 · **Information on components:**
CAS: 67-63-0 propan-2-ol

Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: irritation)

CAS: 9036-19-5 Octylphenol polyethoxyethanol

Irritation of skin	OECD 404	(rabbit: irritation) (ECHA: read across CAS 140-66-9)
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 · **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

 · **Information on components:**
CAS: 67-63-0 propan-2-ol

Sensitisation	OECD 406	(guinea pig: negative) (IUCLID)
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CAS: 9036-19-5 Octylphenol polyethoxyethanol

Sensitisation	Patch test (human)	(negative)
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 · **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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

 · **Reproductive toxicity** Based on available data, the classification criteria are not met.

 · **Information on components:**

CAS 67-63-0: Did not show carcinogenic effects in animal experiments.

CAS: 67-63-0 propan-2-ol

OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test) (Salmonella typhirium, IUCLID)
OECD 476	(negative) (In Vitro Mammalian Cell Gene Mutation Test)
OECD 474	(negative) (Mammalian Erythrocyte Micronucleus Test)

 · **STOT (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.

 · **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.

 · **Aspiration hazard** Based on available data, the classification criteria are not met.

 · **Information on likely routes of exposure**

The main route of uptake for 2-propanol under commercial conditions is through the respiratory tract. [GESTIS]

 · **Additional toxicological information:**

Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.

DMSO readily penetrates skin and may carry other dissolved chemicals into the body.

CAS 67-68-5 / 67-68-5 is skin-resorbing.

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CAS: 67-63-0 propan-2-ol

(source: GESTIS)

Main toxic effects:

acute: irritating effect of the vapors (depending on the concentration) on the mucous membranes; irritating effect of the liquid on the eyes and mucous membranes of the digestive tract.

Systemic effects after massive intoxication: disturbance of the central nervous and cardiovascular systems

chronic: skin damage (very rare), no reports of systemic effects from exposure under industrial conditions

11.2 Information on other hazards**Endocrine disrupting properties**

CAS: 9036-19-5 Octylphenol polyethoxyethanol

List I 0.025–≤0.1%

Other information

According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.

SECTION 12: Ecological information**12.1 Toxicity****Aquatic toxicity:****CAS: 67-63-0 propan-2-ol**

EC50	13299 mg/l/48h (Daphnia magna) (IUCLID)
EC5	4930 mg/l (Entosiphon sulcatum) (72h)
IC50	>1000 mg/l/72h (Desmodesmus subspicatus) (IUCLID)
LC50	1400 mg/l/96h (bluegill) (ECOTOX)

CAS: 9036-19-5 Octylphenol polyethoxyethanol

EC50 (static)	0.011 mg/l/48h (Daphnia magna) (ECHA: read across CAS 140-66-9)
EC50	1.9 mg/l/96h (Pseudokirchneriella subcapitata) (ECHA: read across CAS 140-66-9)
NOEC	0.012 mg/l (zebrafish) (OECD 210) (ECHA: read across CAS 140-66-9)
LC50	0.03 mg/l (Daphnia magna) (OECD 202, 21d) (ECHA: read across CAS 140-66-9)
	0.26 mg/l/96h (gold orfe) (OECD 203) (ECHA: read across CAS 140-66-9)
	4–8.9 mg/l/96h (fathhead minnow) (Merck)

Bacterial toxicity:**CAS: 67-63-0 propan-2-ol**

EC5 1050 mg/l (Pseudomonas putida) (16h)

12.2 Persistence and degradability**CAS: 67-63-0 propan-2-ol**

OECD 301 E 95 % / 21 d, aerob (readily biodegradable) (Modified OECD Screening Test)

CAS: 9036-19-5 Octylphenol polyethoxyethanol

OECD 301 C 22 % / 28 d (not readily biodegradable) (aerob)

12.3 Bioaccumulative potential

Pow = n-octanol/wasser partition coefficient

log Pow < 1 = Does not accumulate in organisms.

log Pow 1-3 = Not worth-mentioning accumulating in organisms.

CAS: 67-63-0 propan-2-ol

log Pow 0.05 (.) (OECD 107)

CAS: 9036-19-5 Octylphenol polyethoxyethanol

log Pow 2.7 (.) (calculated)

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- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
- **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects** Avoid transfer into the environment.
- **Water hazard:**
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.

SECTION 13: Disposal considerations



- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to disposers of hazardous waste.

European waste catalogue

16 05 06* laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

- | | |
|--|---|
| <ul style="list-style-type: none"> · 14.1 UN number or ID number · ADR, IMDG, IATA | UN1993 |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG, IATA | 1993 FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL (ISOPROPYL ALCOHOL))
FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL) |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR <div style="text-align: center; margin: 10px 0;">  </div> <ul style="list-style-type: none"> · Class · Label | 3 (F1) Flammable liquids.
3 |
| <ul style="list-style-type: none"> · IMDG, IATA <div style="text-align: center; margin: 10px 0;">  </div> <ul style="list-style-type: none"> · Class · Label | 3 Flammable liquids.
3 |
| <ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA | III |
| <ul style="list-style-type: none"> · 14.5 Environmental hazards: | Not applicable. |
| <ul style="list-style-type: none"> · 14.6 Special precautions for user · Kemler Number: · EMS Number: · Stowage Category | Warning: Flammable liquids.
30
F-E, S-E
A |
| <ul style="list-style-type: none"> · 14.7 Maritime transport in bulk according to IMO instruments | Not applicable. |

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· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

* SECTION 15: Regulatory information

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

· **Poisons Act UK**

· **Regulated explosives precursors**

None of the ingredients is listed.

· **Regulated poisons**

None of the ingredients is listed.

· **Reportable explosives precursors**

None of the ingredients is listed.

· **Reportable poisons**

Products containing less than 1% of any of the reportable substances are in general of no concern.

· **Regulation (EU) 2019/1148 on the marketing and use of explosives precursors** not regulated

· **Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)**

None of the ingredients is listed.

· **Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)**

None of the ingredients is listed.

· **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)**

CAS: 9036-19-5 | Octylphenol polyethoxyethanol

· **Substances of very high concern (SVHC) according to REACH, Article 57**

This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).

· **Substances of very high concern (SVHC) according to UK REACH**

This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).

· **Directive 2012/18/EU (SEVESO III):**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category P5c** FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50000 t

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- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
 - **Information about limitation of use:** Not required.
 - **National regulations**
 - **VOC-value EC:** 791.3 g/l
 - **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.
-

* SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

- **Training hints** Provide adequate information, instruction and training for operators.
- **Relevant phrases**
 - H225 Highly flammable liquid and vapour.
 - H302 Harmful if swallowed.
 - H315 Causes skin irritation.
 - H318 Causes serious eye damage.
 - H319 Causes serious eye irritation.
 - H336 May cause drowsiness or dizziness.
 - H400 Very toxic to aquatic life.
 - H410 Very toxic to aquatic life with long lasting effects.
- **Abbreviations and acronyms:**
 - OECD: Organisation for Economic Co-operation and Development
 - STOT: specific target organ toxicity
 - SE: single exposure
 - RE: repeated exposure
 - EC50: half maximal effective concentration
 - IC50: half maximal inhibitory concentration
 - NOEL or NOEC: No Observed Effect Level or Concentration
 - c.c.: closed cup
 - ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 - IMDG: International Maritime Code for Dangerous Goods
 - IATA: International Air Transport Association
 - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - ELINCS: European List of Notified Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - DNEL: Derived No-Effect Level (UK REACH)
 - PNEC: Predicted No-Effect Concentration (UK REACH)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - SVHC: Substances of Very High Concern
 - vPvB: very Persistent and very Bioaccumulative
 - Flam. Liq. 2: Flammable liquids – Category 2
 - Flam. Liq. 3: Flammable liquids – Category 3
 - Acute Tox. 4: Acute toxicity – Category 4
 - Skin Irrit. 2: Skin corrosion/irritation – Category 2
 - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 - Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 - Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 - Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
- **Sources**
 - Data arise from safety data sheets, reference works and literature.
 - RTECS (Registry of Toxic Effects of Chemical Substances)
 - ECHA: European Chemicals Agency <http://echa.europa.eu>
 - IUCLID (International Uniform Chemical Information Database)
 - ECOTOX Database
 - GESTIS- Stoffdatenbank (Substance Database, Germany)
- * **Data compared to the previous version altered.**