

Safety data sheet Safety Data Sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: **K929**

Version: **5.0 en**

Replaces version of: 2024-09-21

Version: (4)

date of compilation: 2017-05-18

Revision: 2025-02-19

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

1.1 Product identifier

Identification of the substance **ROTI®-Load 1 , 4x conc., reducing**
Article number **K929**

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

Relevant identified uses: Laboratory chemical
Laboratory and analytical use
Uses advised against: Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household). Food, drink and animal feeding-stuffs.

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co. KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0

Telefax: +49 (0) 721 - 56 06 149

e-mail: sicherheit@carlroth.de

Website: www.carlroth.de

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

e-mail (competent person): sicherheit@carlroth.de

1.4 Emergency telephone number

| Name | Street | Postal code/city | Telephone | Website |
|---|-----------|----------------------|--------------|---------|
| National Poisons Information Service City Hospital | Dudley Rd | B187QH Birmingham | 844 892 0111 | |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

| Section | Hazard class | Cat-egory | Hazard class and category | Hazard statement |
|---------|-----------------------------------|-----------|---------------------------|------------------|
| 3.1O | Acute toxicity (oral) | 4 | Acute Tox. 4 | H302 |
| 3.1D | Acute toxicity (dermal) | 3 | Acute Tox. 3 | H311 |
| 3.1I | Acute toxicity (inhal.) | 4 | Acute Tox. 4 | H332 |
| 3.2 | Skin corrosion/irritation | 2 | Skin Irrit. 2 | H315 |
| 3.3 | Serious eye damage/eye irritation | 1 | Eye Dam. 1 | H318 |

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929

| Section | Hazard class | Cat-egory | Hazard class and category | Hazard statement |
|---------|---|-----------|---------------------------|------------------|
| 3.4S | Skin sensitisation | 1 | Skin Sens. 1 | H317 |
| 3.9 | Specific target organ toxicity - repeated exposure | 2 | STOT RE 2 | H373 |
| 4.1C | Hazardous to the aquatic environment - chronic hazard | 2 | Aquatic Chronic 2 | H411 |

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Delayed or immediate effects can be expected after short or long-term exposure. Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling

Signal word

Danger

Pictograms

GHS05, GHS06,
GHS08, GHS09



Hazard statements

| | |
|-----------|---|
| H302+H332 | Harmful if swallowed or if inhaled |
| H311 | Toxic in contact with skin |
| H315 | Causes skin irritation |
| H317 | May cause an allergic skin reaction |
| H318 | Causes serious eye damage |
| H373 | May cause damage to organs (liver, heart) through prolonged or repeated exposure (if swallowed) |
| H411 | Toxic to aquatic life with long lasting effects |

Precautionary statements

Precautionary statements - prevention

| | |
|------|---------------------------------------|
| P273 | Avoid release to the environment |
| P280 | Wear protective gloves/eye protection |

Precautionary statements - response

| | |
|----------------|---|
| P302+P352 | IF ON SKIN: Wash with plenty of water |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing |
| P310 | Immediately call a POISON CENTER/doctor |

Hazardous ingredients for labelling:

2-Mercaptoethanol, Sodium dodecyl sulfate

2.3 Other hazards

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of $\geq 0,1\%$.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929



SECTION 3: Composition/information on ingredients

3.1 Substances

not relevant (mixture)

3.2 Mixtures

Description of the mixture

| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms | Notes |
|------------------------|--|-----------|---|--|-------|
| Glycerine | CAS No 56-81-5 EC No 200-289-5 | 25 - 50 | | | IOELV |
| 2-Mercaptoethanol | CAS No 60-24-2 EC No 200-464-6 | 10 - < 20 | Acute Tox. 3 / H301 Acute Tox. 2 / H310 Acute Tox. 3 / H331 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Skin Sens. 1 / H317 STOT RE 2 / H373 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410 |  | |
| Sodium dodecyl sulfate | CAS No 151-21-3 EC No 205-788-1 | 5 - < 10 | Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Aquatic Chronic 3 / H412 |  | |

Notes

IOELV: Substance with a community indicative occupational exposure limit value

| Name of substance | Identifier | Specific Conc. Limits | M-Factors | ATE | Exposure route |
|------------------------|--|-----------------------|-----------|--|--------------------------------------|
| 2-Mercaptoethanol | CAS No 60-24-2 EC No 200-464-6 | - | - | 244 mg/kg 112 mg/kg 2,03 mg/l/4h | oral dermal inhalation: vapour |
| Sodium dodecyl sulfate | CAS No 151-21-3 EC No 205-788-1 | - | - | 977 mg/kg | oral |

Remarks

For full text of abbreviations: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. After contact with skin, wash immediately with plenty of water. In case of skin reactions, consult a physician. In case of skin irritation, consult a physician.

Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Following ingestion

Rinse mouth with water (only if the person is conscious). Call a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Irritation, Allergic reactions, Gastrointestinal complaints, Nausea, Vomiting, Risk of serious damage to eyes, Risk of blindness

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings!
water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂), May produce toxic fumes of carbon monoxide if burning.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929

of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handle and open container with care. Provide adequate ventilation as well as local exhaust at critical locations. Clear contaminated areas thoroughly.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Thorough skin-cleansing after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage. Incompatible materials: see section 10.

Consideration of other advice:

Store locked up.

Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

| Country | Name of agent | CAS No | Identifier | TWA [ppm] | TWA [mg/m ³] | STEL [ppm] | STEL [mg/m ³] | Ceiling-C [ppm] | Ceiling-C [mg/m ³] | Notation | Source |
|---------|---------------|---------|------------|-----------|--------------------------|------------|---------------------------|-----------------|--------------------------------|----------|-----------|
| GB | glycerol | 56-81-5 | WEL | | 10 | | | | | mist | EH40/2005 |

Notation

Ceiling-C Ceiling value is a limit value above which exposure should not occur

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929

Notation

| | |
|------|--|
| mist | As mists |
| STEL | Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified) |
| TWA | Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified) |

| Relevant DNELs of components | | | | | | |
|------------------------------|----------|-----------|------------------------|------------------------------------|-------------------|----------------------------|
| Name of substance | CAS No | End-point | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
| Glycerine | 56-81-5 | DNEL | 220 mg/m ³ | human, inhalatory | worker (industry) | chronic - local effects |
| 2-Mercaptoethanol | 60-24-2 | DNEL | 0,17 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| 2-Mercaptoethanol | 60-24-2 | DNEL | 0,17 mg/m ³ | human, inhalatory | worker (industry) | acute - systemic effects |
| 2-Mercaptoethanol | 60-24-2 | DNEL | 0,05 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| 2-Mercaptoethanol | 60-24-2 | DNEL | 0,05 mg/kg bw/day | human, dermal | worker (industry) | acute - systemic effects |
| Sodium dodecyl sulfate | 151-21-3 | DNEL | 285 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| Sodium dodecyl sulfate | 151-21-3 | DNEL | 4.060 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |

| Relevant PNECs of components | | | | | | |
|------------------------------|----------|-----------|-----------------|-----------------------|------------------------------|------------------------------|
| Name of substance | CAS No | End-point | Threshold level | Organism | Environmental compartment | Exposure time |
| Glycerine | 56-81-5 | PNEC | 1.000 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| 2-Mercaptoethanol | 60-24-2 | PNEC | 0,006 mg/l | aquatic organisms | freshwater | short-term (single instance) |
| 2-Mercaptoethanol | 60-24-2 | PNEC | 0,001 mg/l | aquatic organisms | marine water | short-term (single instance) |
| 2-Mercaptoethanol | 60-24-2 | PNEC | 60 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| 2-Mercaptoethanol | 60-24-2 | PNEC | 0,024 mg/kg | aquatic organisms | freshwater sediment | short-term (single instance) |
| 2-Mercaptoethanol | 60-24-2 | PNEC | 0,002 mg/kg | aquatic organisms | marine sediment | short-term (single instance) |
| 2-Mercaptoethanol | 60-24-2 | PNEC | 0,908 mg/kg | terrestrial organisms | soil | short-term (single instance) |
| Sodium dodecyl sulfate | 151-21-3 | PNEC | 0,176 mg/l | aquatic organisms | freshwater | short-term (single instance) |
| Sodium dodecyl sulfate | 151-21-3 | PNEC | 0,018 mg/l | aquatic organisms | marine water | short-term (single instance) |
| Sodium dodecyl sulfate | 151-21-3 | PNEC | 1,35 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| Sodium dodecyl sulfate | 151-21-3 | PNEC | 6,97 mg/kg | aquatic organisms | freshwater sediment | short-term (single instance) |
| Sodium dodecyl | 151-21-3 | PNEC | 0,697 mg/l | aquatic organ- | marine sediment | short-term (single |

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929

| Relevant PNECs of components | | | | | | |
|------------------------------|----------|-----------|-----------------|-----------------------|---------------------------|------------------------------|
| Name of substance | CAS No | End-point | Threshold level | Organisms | Environmental compartment | Exposure time |
| sulfate | | | kg | isms | | instance) |
| Sodium dodecyl sulfate | 151-21-3 | PNEC | 1,29 mg/kg | terrestrial organisms | soil | short-term (single instance) |

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection.

Skin protection



• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material

Butyl caoutchouc (butyl rubber)

• material thickness

0,7 mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• Splash protection - Protective gloves

• type of material: NBR (Nitrile rubber)

• material thickness: >0,3 mm

• breakthrough times of the glove material: >120 minutes (permeation: level 4)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and va-

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929

pours with a boiling point of > 65 °C , colour code: Brown).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|---|
| Physical state | liquid |
| Colour | clear - dark blue |
| Odour | disagreeable - like rotten eggs |
| Melting point/freezing point | not determined |
| Boiling point or initial boiling point and boiling range | not determined |
| Flammability | this material is combustible, but will not ignite readily |
| Lower and upper explosion limit | not determined |
| Flash point | not determined |
| Auto-ignition temperature | not determined |
| Decomposition temperature | not relevant |
| pH (value) | 6 – 7 (20 °C) |
| Kinematic viscosity | not determined |

Solubility(ies)

Water solubility miscible in any proportion

Partition coefficient

Partition coefficient n-octanol/water (log value): this information is not available

Vapour pressure not determined

Density and/or relative density

Density 1,1 – 1,2 g/cm³ at 20 °C

Relative vapour density Information on this property is not available.

Particle characteristics not relevant (liquid)

Other safety parameters

Oxidising properties none

9.2 Other information

Information with regard to physical hazard classes: hazard classes acc. to GHS (physical hazards): not relevant

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: **K929**

Other safety characteristics:

Miscibility

completely miscible with water

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: strong oxidiser, Perchlorates, Strong acid

10.4 Conditions to avoid

Keep away from heat.

10.5 Incompatible materials

different plastics

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to GHS

Acute toxicity

Harmful if swallowed. Toxic in contact with skin. Harmful if inhaled.

Acute toxicity estimate (ATE) of components

| Name of substance | CAS No | Exposure route | ATE |
|------------------------|----------|--------------------|--------------|
| 2-Mercaptoethanol | 60-24-2 | oral | 244 mg/kg |
| 2-Mercaptoethanol | 60-24-2 | dermal | 112 mg/kg |
| 2-Mercaptoethanol | 60-24-2 | inhalation: vapour | 2,03 mg/l/4h |
| Sodium dodecyl sulfate | 151-21-3 | oral | 977 mg/kg |

Acute toxicity of components

| Name of substance | CAS No | Exposure route | Endpoint | Value | Species |
|-------------------|---------|-----------------------|----------|------------------------------|---------|
| Glycerine | 56-81-5 | dermal | LD50 | >10.000 mg/kg | rabbit |
| Glycerine | 56-81-5 | oral | LD50 | 27.200 mg/kg | rat |
| Glycerine | 56-81-5 | inhalation: dust/mist | LC50 | >5.850 mg/m ³ /4h | rat |
| 2-Mercaptoethanol | 60-24-2 | inhalation: vapour | LC50 | 2,03 mg/l/4h | rat |

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: **K929**

| Acute toxicity of components | | | | | |
|-------------------------------------|---------------|-----------------------|-----------------|--------------|----------------|
| Name of substance | CAS No | Exposure route | Endpoint | Value | Species |
| 2-Mercaptoethanol | 60-24-2 | oral | LD50 | 244 mg/kg | rat |
| 2-Mercaptoethanol | 60-24-2 | dermal | LD50 | 112 mg/kg | rabbit |
| Sodium dodecyl sulfate | 151-21-3 | oral | LD50 | 977 mg/kg | rat |
| Sodium dodecyl sulfate | 151-21-3 | dermal | LD50 | >2.000 mg/kg | rat |

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

May cause damage to organs (liver, heart) through prolonged or repeated exposure (if swallowed).

| Hazard category | Target organ | Exposure route |
|------------------------|---------------------|-----------------------|
| 2 | liver | if swallowed |
| 2 | heart | if swallowed |

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Endocrine disruptor for human health

Shall not be classified as an endocrine disruptor for human health.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

vomiting, nausea, gastrointestinal complaints

• If in eyes

Causes serious eye damage, risk of blindness

• If inhaled

irritant effects, cough, Dyspnoea

• If on skin

causes skin irritation, May produce an allergic reaction, pruritis, localised redness, risk of absorption via the skin

• Other information

none

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929

11.2 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

| Aquatic toxicity (acute) of components | | | | | |
|--|----------|----------|-------------|-----------------------|---------------|
| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
| Glycerine | 56-81-5 | LC50 | 54.000 mg/l | fish | 96 h |
| 2-Mercaptoethanol | 60-24-2 | LC50 | 37 mg/l | fish | 96 h |
| 2-Mercaptoethanol | 60-24-2 | EC50 | 0,4 mg/l | aquatic invertebrates | 48 h |
| 2-Mercaptoethanol | 60-24-2 | ErC50 | 19 mg/l | algae | 72 h |
| Sodium dodecyl sulfate | 151-21-3 | LC50 | 29 mg/l | fish | 96 h |
| Sodium dodecyl sulfate | 151-21-3 | ErC50 | >120 mg/l | algae | 72 h |

| Aquatic toxicity (chronic) of components | | | | | |
|--|----------|----------|-------------|-----------------------|---------------|
| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
| 2-Mercaptoethanol | 60-24-2 | EC50 | 125 mg/l | microorganisms | 17 h |
| 2-Mercaptoethanol | 60-24-2 | NOEC | >0,063 mg/l | aquatic invertebrates | 21 d |
| 2-Mercaptoethanol | 60-24-2 | LOEC | 0,126 mg/l | aquatic invertebrates | 21 d |
| Sodium dodecyl sulfate | 151-21-3 | EC50 | 135 mg/l | microorganisms | 3 h |
| Sodium dodecyl sulfate | 151-21-3 | NOEC | 0,88 mg/l | aquatic invertebrates | 7 d |
| Sodium dodecyl sulfate | 151-21-3 | NOEC | ≥1,357 mg/l | fish | 42 d |

12.2 Persistence and degradability

| Degradability of components | | | | | | |
|-----------------------------|----------|---------------------------|------------------|------|--------|--------|
| Name of substance | CAS No | Process | Degradation rate | Time | Method | Source |
| Glycerine | 56-81-5 | biotic/abiotic | 63 % | 14 d | | |
| Sodium dodecyl sulfate | 151-21-3 | biotic/abiotic | 90 % | 28 d | | |
| Sodium dodecyl sulfate | 151-21-3 | carbon dioxide generation | 95 % | 28 d | | ECHA |

12.3 Bioaccumulative potential

Data are not available.

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929

| Bioaccumulative potential of components | | | | |
|---|----------|-----|------------------------------|----------|
| Name of substance | CAS No | BCF | Log KOW | BOD5/COD |
| Glycerine | 56-81-5 | | -1,75 (pH value: 7,4, 25 °C) | |
| 2-Mercaptoethanol | 60-24-2 | | -0,056 (pH value: 7, 25 °C) | |
| Sodium dodecyl sulfate | 151-21-3 | | ≤-2,03 (20 °C) | |

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of $\geq 0,1\%$.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Properties of waste which render it hazardous

- HP 4** irritant - skin irritation and eye damage
- HP 5** specific target organ toxicity (STOT)/aspiration toxicity
- HP 6** acute toxicity
- HP 13** sensitising
- HP 14** ecotoxic

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number or ID number

ADRRID

UN 2810


Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929

| | |
|---|---|
| IMDG-Code | UN 2810 |
| ICAO-TI | UN 2810 |
| 14.2 UN proper shipping name | |
| ADRRID | TOXIC LIQUID, ORGANIC, N.O.S. |
| IMDG-Code | TOXIC LIQUID, ORGANIC, N.O.S. |
| ICAO-TI | Toxic liquid, organic, n.o.s. |
| Technical name (hazardous ingredients) | Thioglycol |
| 14.3 Transport hazard class(es) | |
| ADRRID | 6.1 |
| IMDG-Code | 6.1 |
| ICAO-TI | 6.1 |
| 14.4 Packing group | |
| ADRRID | III |
| IMDG-Code | III |
| ICAO-TI | III |
| 14.5 Environmental hazards | hazardous to the aquatic environment |
| Environmentally hazardous substance (aquatic environment): | Thioglycol |
| 14.6 Special precautions for user | |
| Provisions for dangerous goods (ADR) should be complied within the premises. | |
| 14.7 Maritime transport in bulk according to IMO instruments | |
| The cargo is not intended to be carried in bulk. | |
| 14.8 Information for each of the UN Model Regulations | |
| Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)Additional information | |
| Proper shipping name | TOXIC LIQUID, ORGANIC, N.O.S. |
| Particulars in the transport document | UN2810, TOXIC LIQUID, ORGANIC, N.O.S., (contains: Thioglycol), 6.1, III, (E), environmentally hazardous |
| Classification code | T1 |
| Danger label(s) | 6.1, "Fish and tree" |
|  | |
| Environmental hazards | yes (hazardous to the aquatic environment) |
| Special provisions (SP) | 274, 614, 802(ADN) |
| Excepted quantities (EQ) | E1 |
| Limited quantities (LQ) | 5 L |
| Transport category (TC) | 2 |

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929

| | |
|-------------------------------|----|
| Tunnel restriction code (TRC) | E |
| Hazard identification No | 60 |
| Emergency Action Code | 2X |

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) Additional information

| | |
|----------------------------|----------------------|
| Classification code | T1 |
| Danger label(s) | 6.1, "Fish and tree" |



| | |
|------------------------------|---------------------------|
| Environmental hazards | Yes Hazardous to water |
|------------------------------|---------------------------|

| | |
|--------------------------------|--------------------|
| Special provisions (SP) | 274, 614, 802(ADN) |
|--------------------------------|--------------------|

| | |
|---------------------------------|----|
| Excepted quantities (EQ) | E1 |
|---------------------------------|----|

| | |
|--------------------------------|-----|
| Limited quantities (LQ) | 5 L |
|--------------------------------|-----|

| | |
|--------------------------------|---|
| Transport category (TC) | 2 |
|--------------------------------|---|

| | |
|---------------------------------|----|
| Hazard identification No | 60 |
|---------------------------------|----|

International Maritime Dangerous Goods Code (IMDG) - Additional information

| | |
|--|---|
| Proper shipping name | TOXIC LIQUID, ORGANIC, N.O.S. |
| Particulars in the shipper's declaration | UN2810, TOXIC LIQUID, ORGANIC, N.O.S., (contains: Thioglycol), 6.1, III, MARINE POLLUTANT |
| Marine pollutant | YES (hazardous to the aquatic environment), (Thioglycol) |
| Danger label(s) | 6.1, "Fish and tree" |



| | |
|-------------------------|----------|
| Special provisions (SP) | 223, 274 |
|-------------------------|----------|

| | |
|--------------------------|----|
| Excepted quantities (EQ) | E1 |
|--------------------------|----|

| | |
|-------------------------|-----|
| Limited quantities (LQ) | 5 L |
|-------------------------|-----|

| | |
|-----|----------|
| EmS | F-A, S-A |
|-----|----------|

| | |
|------------------|---|
| Stowage category | A |
|------------------|---|

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

| | |
|--|---|
| Proper shipping name | Toxic liquid, organic, n.o.s. |
| Particulars in the shipper's declaration | UN2810, Toxic liquid, organic, n.o.s., (contains: Thioglycol), 6.1, III |
| Environmental hazards | YES (hazardous to the aquatic environment) |
| Danger label(s) | 6.1 |



| | |
|-------------------------|--------------|
| Special provisions (SP) | A3, A4, A137 |
|-------------------------|--------------|

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929

| | |
|--------------------------|-----|
| Excepted quantities (EQ) | E1 |
| Limited quantities (LQ) | 2 L |

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Seveso Directive

| 2012/18/EU (Seveso III) | | | |
|-------------------------|--|---|-------|
| No | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | Notes |
| E2 | environmental hazards (hazardous to the aquatic environment, cat. 2) | 200 500 | 57) |

Notation

57) Hazardous to the Aquatic Environment in category Chronic 2

Deco-Paint Directive

| | |
|--|-----------|
| VOC content | 25,92 % |
| VOC content (Water content was discounted) | 465,2 g/l |

Industrial Emissions Directive (IED)

| | |
|--|-----------|
| VOC content | 19,1 % |
| VOC content (Water content was discounted) | 342,8 g/l |

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

Water Framework Directive (WFD)

| List of pollutants (WFD) | | | | |
|--------------------------|---|--------|-----------|---------|
| Name of substance | Name acc. to inventory | CAS No | Listed in | Remarks |
| Sodium dodecyl sulfate | Metals and their compounds | | a) | |
| 2-Mercaptoethanol | Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment | | a) | |

Legend

a) Indicative list of the main pollutants

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929

Regulation on the marketing and use of explosives precursors

none of the ingredients are listed

Regulation on drug precursors

none of the ingredients are listed

Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are listed

Regulation concerning the export and import of hazardous chemicals (PIC)

none of the ingredients are listed

Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

National regulations(GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

none of the ingredients are listed

Restrictions according to GB REACH, Annex 17

| Dangerous substances with restrictions (GB REACH, Annex 17) | | | |
|---|--|--------|----|
| Name of substance | Name acc. to inventory | CAS No | No |
| ROTI®-Load 1 | this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC | | 3 |

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

| Country | Inventory | Status |
|---------|------------|--------------------------------|
| AU | AIIC | not all ingredients are listed |
| CA | DSL | not all ingredients are listed |
| CA | NDSL | not all ingredients are listed |
| CN | IECSC | not all ingredients are listed |
| EU | ECSI | all ingredients are listed |
| EU | REACH Reg. | not all ingredients are listed |
| JP | CSCL-ENCS | not all ingredients are listed |
| JP | ISHA-ENCS | not all ingredients are listed |
| KR | KECI | not all ingredients are listed |
| MX | INSQ | not all ingredients are listed |
| NZ | NZIoC | not all ingredients are listed |
| PH | PICCS | not all ingredients are listed |
| TR | CICR | not all ingredients are listed |
| TW | TCSI | all ingredients are listed |
| US | TSCA | not all ingredients are listed |

Legend

AIIC Australian Inventory of Industrial Chemicals
CICR Chemical Inventory and Control Regulation
CSCL-ENCS List of Existing and New Chemical Substances (CSCL-ENCS)

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929

Legend

| | |
|------------|---|
| DSL | Domestic Substances List (DSL) |
| ECSI | EC Substance Inventory (EINECS, ELINCS, NLP) |
| IECSC | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ | National Inventory of Chemical Substances |
| ISHA-ENCS | Inventory of Existing and New Chemical Substances (ISHA-ENCS) |
| KECI | Korea Existing Chemicals Inventory |
| NDSL | Non-domestic Substances List (NDSL) |
| NZIoC | New Zealand Inventory of Chemicals |
| PICCS | Philippine Inventory of Chemicals and Chemical Substances (PICCS) |
| REACH Reg. | REACH registered substances |
| TCSI | Taiwan Chemical Substance Inventory |
| TSCA | Toxic Substance Control Act |

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|---------|---------------------------|--|-----------------|
| 15.1 | | List of pollutants (WFD): change in the listing (table) | yes |
| 15.1 | | National inventories: change in the listing (table) | yes |

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|-----------------|---|
| Acute Tox. | Acute toxicity |
| ADR | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road) |
| Aquatic Acute | Hazardous to the aquatic environment - acute hazard |
| Aquatic Chronic | Hazardous to the aquatic environment - chronic hazard |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BOD | Biochemical Oxygen Demand |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| Ceiling-C | Ceiling value |
| COD | Chemical oxygen demand |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DNEL | Derived No-Effect Level |
| EC50 | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval |
| EC No | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |
| ED | Endocrine disruptor |
| EH40/2005 | EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929

| Abbr. | Descriptions of used abbreviations |
|-------------|---|
| EmS | Emergency Schedule |
| ErC50 | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control |
| Eye Dam. | Seriously damaging to the eye |
| Eye Irrit. | Irritant to the eye |
| GB REACH | The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended) |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| ICAO-TI | Technical instructions for the safe transport of dangerous goods by air |
| IMDG | International Maritime Dangerous Goods Code |
| IMDG-Code | International Maritime Dangerous Goods Code |
| index No | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 |
| LC50 | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval |
| LD50 | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval |
| LOEC | Lowest Observed Effect Concentration |
| log KOW | n-Octanol/water |
| NLP | No-Longer Polymer |
| NOEC | No Observed Effect Concentration |
| PBT | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted No-Effect Concentration |
| ppm | Parts per million |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| Skin Corr. | Corrosive to skin |
| Skin Irrit. | Irritant to skin |
| Skin Sens. | Skin sensitisation |
| STEL | Short-term exposure limit |
| STOT RE | Specific target organ toxicity - repeated exposure |
| TWA | Time-weighted average |
| VOC | Volatile Organic Compounds |
| vPvB | Very Persistent and very Bioaccumulative |
| WEL | Workplace exposure limit |

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



ROTI®-Load 1 , 4x conc., reducing

article number: K929

Classification procedure

Physical and chemical properties. The classification is based on tested mixture.

Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text |
|------|--|
| H301 | Toxic if swallowed. |
| H302 | Harmful if swallowed. |
| H310 | Fatal in contact with skin. |
| H311 | Toxic in contact with skin. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H331 | Toxic if inhaled. |
| H332 | Harmful if inhaled. |
| H373 | May cause damage to organs (liver, heart) through prolonged or repeated exposure (if swallowed). |
| 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. |
| H412 | Harmful to aquatic life with long lasting effects. |

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.