



SDS according to Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex II-EU

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

Date issued 28.11.2015

1.1. Product identifier

Product name Unger RO-Membrane Maintenance

Article no. 15436

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

Function Maintenance product

Product group Cleaning agents

Use of the substance/preparation Protection agent

Uses advised against Only for industrial and professional use

The chemical can be used by the general public No

1.3. Details of the supplier of the safety data sheet

Company name Unger Germany GmbH

Postal address Piepersberg 44

Postcode D-42653

City Solingen

Country Germany

Tel +49 (0) 212 2207 0

Fax +49 (0) 212 2207 137

E-mail compliance@unger-europe.com

Website <http://www.ungerglobal.com>

1.4. Emergency telephone number

Emergency telephone Business hours: Monday to Thursday 8 am - 5 pm, Friday 8 am - 4 pm: +49 (0) 212 22 07 0

SECTION 2: Hazards identification

2.1. Classification of substance or mixture

Classification according to Acute tox. 4; H302

Regulation (EC) No 1272/2008

[CLP/GHS]

2.2. Label elements

Hazard Pictograms (CLP)



Composition on the label Ethylene glycol: 15 < 30 % wt/wt, Sodium hydrogensulfite: 1 < 5 % wt/wt

Signal word Warning

Hazard statements	H302 Harmful if swallowed.
Precautionary statements	P101 If medical advice is needed, have product container or label at hand. P280 Wear protective gloves / protective clothing / eye protection / face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P405 Store locked up.

2.3. Other hazards

Physico-chemical effects	Cf. section 9 for physical-chemical information.
Health effect	May irritate eyes and skin.
Environmental effects	Cf. section 12 for information on ecology.
Symptoms and effects of potential misuse	No information required.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance	Identification	Classification	Contents
Ethylene glycol	CAS no.: 107-21-1 EC no.: 203-473-3 Index no.: 603-027-00-1 Registration number: 01-2119456816-28 Synonyms: Glycol IUPAC name: Ethane-1,2-diol	Acute tox. 4;H302;	15 < 30 % wt/wt
Sodium hydrogensulfite	CAS no.: 7631-90-5 EC no.: 231-548-0 Index no.: 016-064-00-8 Registration number: 01-2119524563-42 Synonyms: Sodium bisulphite IUPAC name: Sulphurous acid, sodium salt	Acute tox. 4;H302;	1 < 5 % wt/wt
Description of the mixture	Aqueous solution of organic and inorganic substances. Green.		

SECTION 4: First aid measures

4.1. Description of first aid measures

General	Place unconscious person on the side in the recovery position and ensure breathing can take place. If medical advice is needed, have product container or label at hand.
Inhalation	Due to the small packaging the risk of inhalation is minimal. IF INHALED: Move into fresh air and keep at rest.
Skin contact	Wash skin with soap and water.
Eye contact	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring along these instructions.
Ingestion	Immediately rinse mouth and drink plenty of water (200-300 ml). Do not give victim anything to drink if he is unconscious. Do NOT induce vomiting. If medical advice is needed, have product container or label at hand.

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

Acute symptoms and effects	Burning sensation.
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4.3. Indication of any immediate medical attention and special treatment needed

Specific details on antidotes	Decontamination, symptomatic treatment. No special antidote known.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Product doesn't ignite. Use fire-extinguishing media appropriate for surrounding materials.
Improper extinguishing media	Water jet.

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	This product is not flammable.
Hazardous combustion products	Carbon dioxide (CO ₂). Carbon monoxide (CO). Sulfur dioxide (SO ₂). Organic decomposition products.

5.3. Advice for firefighters

Personal protective equipment	In case of inadequate ventilation wear respiratory protection. Use personal protective equipment as required.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Avoid aerosol formation. Avoid contact with eyes and skin.
Personal protection measures	Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.
Hazardous combustion products	Cf. section 5

6.1.2. For emergency responders

For emergency responders	In case of inadequate ventilation wear respiratory protection. Use personal protective equipment as required.
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6.2. Environmental precautions

Environmental precautionary measures	Avoid discharge into drains, water courses or onto the ground.
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6.3. Methods and material for containment and cleaning up

Cleaning method	Absorb spillage with non-combustible, absorbent material. Sweep-up or pick-up with an industrial vacuum cleaner, store in closed container for disposal.
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6.4. Reference to other sections

Other instructions	Cf. section 8 for personal protection, and section 13 for waste disposal.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Observe good chemical hygiene practices. Avoid contact with eyes and prolonged skin contact. Avoid eating, drinking and smoking when using the product.
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7.2. Conditions for safe storage, including any incompatibilities

Storage	Store at moderate temperatures in dry, well ventilated area.
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Conditions for safe storage

Requirements for storage rooms and vessels	Storage in gateways, passages, stairways, hallways open to public, roofs, attics, cellars and work-rooms is not admissible.
Advice on storage compatibility	No incompatibilities known.

7.3. Specific end use(s)

Recommendations	cf. section 1.2
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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure limit values

Substance	Identification	Value	TWA Year
Ethylene glycol	CAS no.: 107-21-1 EC no.: 203-473-3	8-hour TWA: 52 mg/m ³ WEL - Long-term value	

Index no.: 603-027-00-1 Registration number: 01-2119456816-28 Synonyms: Glycol	Workplace Exposure Limit - 8-hours mean shift value Guidance Note EH40 – Occupational Exposure Limits / United Kingdom 15 min.: 104 mg/m ³ WEL - Short-term value Workplace Exposure Limit - 15-minutes short-term value Guidance Note EH40 – Occupational Exposure Limits / United Kingdom
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Sodium hydrogensulfite	CAS no.: 7631-90-5 EC no.: 231-548-0 Index no.: 016-064-00-8 Registration number: 01-2119524563-42 Synonyms: Sodium bisulphite	8-hour TWA: 5 mg/m ³ WEL - Long-term value Workplace Exposure Limit - 8-hours mean shift value Guidance Note EH40 – Occupational Exposure Limits / United Kingdom	
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DNEL / PNEC

Recommended monitoring procedures	NIOSH 5223: Glycols. OSHA PV2024: Ethylene glycol.
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8.2. Exposure controls

Precautionary measures to prevent exposure

Organisational measures to prevent exposure	Thoroughly clean hands, forearms, and face after handling of the product, before eating, drinking and lavatory use, and at the end of the work shift.
Technical measures to prevent exposure	Use engineering controls to reduce air contamination to permissible exposure level.

Respiratory protection

Respiratory protection	Under normal conditions of use respiration protection should not be required. In case of inadequate ventilation or when the product is heated, use suitable respiratory equipment with gas filter (type A2).
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Hand protection

Hand protection	For prolonged or repeated skin contact use suitable protective gloves.
Reference to relevant standard	On basis of test data.
Suitable materials	Gloves of nitrile rubber, PVA or Viton are recommended.
Unsuitable materials	Leather or textile.
Breakthrough time	>480 min
Thickness of glove material	0,4 mm

Eye / face protection

Eye protection	Wear approved, tight fitting safety glasses where splashing is probable.
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Skin protection

Skin protection (except hands)	Generally regular work clothing sufficient.
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Hygiene / Environmental

Specific hygiene measures	No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals. When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet.
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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid. Non-viscous.
Colour	Green.
Odour	Odourless.
pH (as supplied)	Value: 5 Test temperature: 20 °C
Boiling point / boiling range	Value: 100 °C
Comments, Boiling point / boiling range	No data recorded.
Comments, Flash point	No data recorded.
Comments, Evaporation rate	No data recorded.
Flammability (solid, gas)	No data recorded.
Comments, Vapour pressure	No data recorded.
Comments, Vapour density	No data recorded.
Density	Value: 1,045 g/ml Temperature: 20 °C
Solubility in water	Unlimited miscible
Comments, Decomposition temperature	No data recorded.
Comments, Viscosity	No data recorded.
Explosive properties	Not explosive
Oxidising properties	Not oxidizing

9.2. Other information

Softening point	Comments: No data available
Content Of Voc	Comments: No data available

Physical hazards

Comments, Particle size	No data recorded.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Stable in normal conditions.
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10.2. Chemical stability

Stability	Stable under normal temperature conditions and recommended use.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	No hazardous reactions under regular storage and handlings conditions known.
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10.4. Conditions to avoid

Conditions to avoid	Heating.
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10.5. Incompatible materials

Materials to avoid	Strong acids.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Organic decomposition products.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity, Mixture estimate	Route of exposure: Oral Type: ATE mix (calculated) Value: 1886,8 mg/kg
Acute toxicity, Mixture estimate	Route of exposure: Oral Type: ATE ethylene glycol Value: 500 mg/kg
Acute toxicity, Mixture estimate	Route of exposure: Oral Type: ATE sodium hydrogensulfite

Value: 500 mg/kg

Potential acute effects

Inhalation	No specific health warnings noted. Dust may irritate respiratory system.
Skin contact	No specific health warnings noted. Dust has an irritating effect on moist skin. Prolonged contact may cause redness and irritation.
Eye contact	No specific health warnings noted. Prolonged contact may cause redness and/or tearing. Causes serious eye irritation.
Ingestion	No specific health warnings noted. The product causes irritation of mucous membranes and may cause abdominal discomfort if swallowed. Ingestion may cause irritation of the gastrointestinal tract, vomiting and diarrhoea.
Aspiration hazard	No data recorded.

Delayed effects / repeated exposure

Sensitisation	No specific health warnings noted.
STOT-single exposure	No data available, probably no subchronic toxicity
STOT-repeated exposure	No data available, probably no chronic toxicity

Carcinogenic, Mutagenic or Reprotoxic

Carcinogenicity	No specific health warnings noted.
Mutagenicity	No specific health warnings noted.
Teratogenic properties	No specific health warnings noted.
Reproductive toxicity	No specific health warnings noted.

SECTION 12: Ecological information**12.1. Toxicity**

Aquatic, comments	Data lacking.
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12.2. Persistence and degradability

Persistence and degradability	The organic component is considered biodegradable, the inorganic component is not biodegradable but assimilable into mineralic life cycles.
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12.3. Bioaccumulative potential

Bioaccumulative potential	The product is not bioaccumulating.
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12.4. Mobility in soil

Mobility	No data on possible environmental effects have been found.
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12.5. Results of PBT and vPvB assessment

PBT assessment results	This product does not contain any PBT or vPvB substances.
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12.6. Other adverse effects

Comments, Ozone depletion potential	Ozone depletion potential not known
Comments, Photochemical ozone creation	Ozone formation potential not known
Comments Global warming potential	Global greenhouse effect not known

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Specify the appropriate methods of disposal	Dispose of waste and residues in accordance with local authority requirements. No specific disposal method required.
Relevant waste regulation	European Waste Inventory according to the Decision 2014/955/EU on the list of waste
Hazardous waste packing	Submit contaminated packagings to take-back systems or to a regulated recycling or disposal by an approved disposal company. Recommended waste key codes: 15 01 10* Packaging containing residues of or contaminated by hazardous substances
EWC waste code	EWC: 200130 detergents other than those mentioned in 20 01 29

SECTION 14: Transport information

14.1. UN number

Comments No recommendation given.

14.2. UN proper shipping name

Comments No recommendation given.

14.3. Transport hazard class(es)

Comments No recommendation given.

14.4. Packing group

Comments No recommendation given.

14.5. Environmental hazards

Comments No recommendation given.

14.6. Special precautions for user

Special safety precautions for user No recommendation given.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Product name No recommendation given.

Additional information.

Additional information. The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

ADR / RID - Other information

ADR Other information No recommendation given.

ADN - Other information

Other information No recommendation given.

IMDG / ICAO / IATA Other information

IMDG Other information No recommendation given.

SECTION 15: Regulatory information

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

EEC-directive Regulation (EC) No. 1907/2006 and Regulation (EC) 2015/830
Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures.

References (laws/regulations) Health and Safety at Work Act 1974.
The Managing for health and safety (HSG65) 2013.
L5 Control of substances hazardous to Health. The Control of Substances Hazardous to Health Regulations 2002. Approved codes of practice and guidance.
Guidance Note EH40 – Occupational Exposure Limits.
BS EN ISO 10882-1:2001 – health and safety in welding and allied processes – sampling of air-borne particles and gases in the operator's breathing zone – part 1: sampling of airborne particles.

15.2. Chemical safety assessment

Chemical safety assessment performed No

Chemical Safety Assessment No data recorded.

Exposure scenarios for mixture No

Exposure Scenario Comments No recommendation given.

SECTION 16: Other information

Supplier's notes The information on this data sheet represents our current data and is reliable

	provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.
Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]	Acute tox. 4; H302;
List of relevant H-phrases (Section 2 and 3).	H302 Harmful if swallowed.
Training advice	No information required.
Recommended restrictions on use	Not relevant.
User notes	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, as far as not expressly stated otherwise.
Version	1
Responsible for safety data sheet	Unger Germany GmbH