

SAFETY DATA SHEET

RO membrane maintenance (EN)



The safety data sheet is in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

Date issued	28.11.2015
Revision date	29.11.2018

1.1. Product identifier

Product name	RO membrane maintenance (EN)
Article no.	15436

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

Function	Description: 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
Telephone number	+49 (0) 212 2207 0
Fax	+49 (0) 212 2207 222
Email	compliance@unger-europe.com
Website	www.ungerglobal.com / www.my-unger.com

1.4. Emergency telephone number

Emergency telephone	Telephone number: +49 (0) 212 22 07 0 Description: Business hours: Monday to Thursday 8 am - 5 pm, Friday 8 am - 4 pm
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SECTION 2: Hazards identification

2.1. Classification of substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Acute tox. 4; H302
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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

Physicochemical 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 REACH Reg. No.: 01-2119456816-28	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 REACH Reg. No.:	Acute tox. 4; H302	1 < 5 % wt/wt

01-2119524563-42

Description of the mixture	Aqueous solution of organic and inorganic substances. Green.
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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.
For emergency responders	In case of inadequate ventilation wear respiratory protection. Use personal protective equipment as required.

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

Clean up	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

Substance	Identification	Value	TWA Year
Ethylene glycol	CAS No.: 107-21-1	TWA (8h) : 52 mg/m ³ Exposure limit letter Letter code: WEL - Long-term value Exposure limit letter Letter description:	

Workplace Exposure Limit -
8-hours mean shift value
Source: Guidance Note
EH40 – Occupational
Exposure Limits / United
Kingdom

OEL short term value

Value: 104 mg/m³

Exposure limit letter

Letter code: WEL -
Short-term value

Exposure limit letter

Letter description:
Workplace Exposure Limit -
15-minutes short-term
value

Source: Guidance Note
EH40 – Occupational
Exposure Limits / United
Kingdom

Sodium hydrogensulfite

CAS No.: 7631-90-5

TWA (8h) : 5 mg/m³**Exposure limit letter**

Letter code: WEL -
Long-term value

Exposure limit letter

Letter description:
Workplace Exposure Limit -
8-hours mean shift value

Source: Guidance Note
EH40 – Occupational
Exposure Limits / United
Kingdom

Biological limit value

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

8.2. Exposure controls

Safety signs



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.

Eye / face protection

Required Properties

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

Hand protection

Skin- / hand protection, long term contact	For prolonged or repeated skin contact use suitable protective gloves.
Suitable materials	Gloves of nitrile rubber, PVA or Viton are recommended.
Unsuitable materials	Leather or textile.
Breakthrough time	Value: >480 min
Thickness of glove material	Value: 0,4 mm
Hand protection, comments	On basis of test data.

Skin protection

Suitable protective clothing	Generally regular work clothing sufficient.
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Respiratory protection

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

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	Status: In delivery state Value: 5 Temperature: 20 °C
Boiling point / boiling range	Value: 100 °C Comments: No data recorded.
Flash point	Comments: No data recorded.
Evaporation rate	Comments: No data recorded.
Flammability (solid, gas)	No data recorded.
Vapour pressure	Comments: No data recorded.
Vapour density	Comments: No data recorded.
Density	Value: 1,045 g/ml Temperature: 20 °C

Solubility	Medium: Water Comments: Unlimited miscible
Decomposition temperature	Comments: No data recorded.
Viscosity	Comments: No data recorded.
Explosive properties	Not explosive
Oxidising properties	Not oxidizing

9.2. Other information

Softening point	Comments: No data available
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Physical hazards

Content of VOC	Comments: No data available
Particle size	Comments: No data recorded.

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

Other information regarding health hazards

Acute toxicity, mixture estimate	Route of exposure: Oral Type: ATE mix (calculated) Value: 1886,8 mg/kg
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	Route of exposure: Oral Type: ATE ethylene glycol Value: 500 mg/kg
	Route of exposure: Oral Type: ATE sodium hydrogensulfite Value: 500 mg/kg
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.
Sensitisation	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.
Mutagenicity	No specific health warnings noted.
Assessment of germ cell mutagenicity, classification	No specific health warnings noted.
Carcinogenicity, other information	No specific health warnings noted.
Reproductive toxicity	No specific health warnings noted.
Specific target organ toxicity SE, human experience	No data available, probably no chronic toxicity
Assessment of specific target organ SE, classification	No data available, probably no subchronic toxicity
Aspiration hazard, comments	No data recorded.

SECTION 12: Ecological information

12.1. Toxicity

Aquatic, comments	Data lacking.
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12.2. Persistence and degradability

Persistence and degradability, comments	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

Ozone depletion potential	Comments: Ozone depletion potential not known
Photochemical ozone creation potential	Comments: Ozone formation potential not known
Global warming potential	Comments: 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.
EWC waste code	EWC waste code: 150110 packaging containing residues of or contaminated by dangerous substances Classified as hazardous waste: Yes EWC waste code: 200130 detergents other than those mentioned in 20 01 29 Classified as hazardous waste: Yes
EU Regulations	European Waste Inventory according to the Decision 2014/955/EU on the list of waste
Other information	Submit contaminated packagings to take-back systems or to a regulated recycling or disposal by an approved disposal company.

SECTION 14: Transport information

14.1. UN number

Comments	No recommendation given.
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14.2. UN proper shipping name

Comments	No recommendation given.
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14.3. Transport hazard class(es)

Comments	No recommendation given.
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14.4. Packing group

Comments	No recommendation given.
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14.5. Environmental hazards

Comments	No recommendation given.
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14.6. Special precautions for user

Special safety precautions for user	No recommendation given.
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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Product name	No recommendation given.
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Additional information

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

ADR additional information	No recommendation given.
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ADN - Other information

ADN additional information	No recommendation given.
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IMDG / ICAO / IATA Other information

IMDG Additional information	No recommendation given.
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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
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	the product in combination with any other product or any other process is the responsibility of the user.
List of relevant H-phrases (Section 2 and 3)	H302 Harmful if swallowed.
Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Acute tox. 4; H302;
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
Comments	Previous version: 1.0 from 28.11.2015 Current version: 1.1 from 29.11.2018 Type of change: recreating Reason for change: expiry of the last transitional period of Regulation (EC) No 1907/2006 (REACH Regulation) on 31 May 2018.