

Safety Data Sheet

according to Regulation (EC) No 1907/2006

RHEOSOL-IR enzyme

Revision date: 19.10.2021

Product code: 20577

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

1.1. Product identifier

RHEOSOL-IR enzyme

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

Use of the substance/mixture

Enzymatic cleaner for instruments and medical equipment

1.3. Details of the supplier of the safety data sheet

Company name:	NW-Chemie GmbH	
Street:	Langbaughstr. 15	
Place:	D-53842 Troisdorf	
Telephone:	+49 2241-3923-0	Telefax: +49 2241-3923-90
e-mail:	info@rheosol.de	
Contact person:	Dr. Friedrichs (MSDS qualified person)	Telephone: +49 2241-3923-0
e-mail:	sicherheit@rheosol.de	
Internet:	www.rheosol.de	
Responsible Department:	Produktsicherheit	

1.4. Emergency telephone number:

Giftnotruf Berlin (Germany): +49 30 30686 700

Further Information

This safety data sheet replaces the former safety data sheet.
The affected sections are listed in section 16.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Serious eye damage/eye irritation: Eye Dam. 1
Hazard Statements:
Causes serious eye damage.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

isotridecanol, ethoxylated
quartary ammonium compounds, cocoalkyl bis (hydroxyethyl)methyl,ethoxylated, methylsulfate

Signal word: Danger

Pictograms:



Hazard statements

H318 Causes serious eye damage.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.
P310 Immediately call a POISON CENTER/doctor.

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Additional advice on labelling

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
69011-36-5	isotridecanol, ethoxylated			1 - < 5 %
	Acute Tox. 4, Eye Dam. 1; H302 H318			
68989-03-7	quartary ammonium compounds, cokoalkyl bis (hydroxyethyl)methyl,ethoxylated, methylsulfate			1 - < 5 %
	Eye Dam. 1, Aquatic Chronic 2; H318 H411			
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether			1 - < 5 %
	203-961-6		01-2119475104-44	
	Eye Irrit. 2; H319			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
69011-36-5		isotridecanol, ethoxylated	1 - < 5 %
		oral: LD50 = 500 mg/kg	

Further Information

Note: The danger characteristics refer to the properties of the neat substances.

Full text of R- and H-phrases: see section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Remove contaminated, saturated clothing immediately. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalationIn case of inhaling spray mist, consult a physician.
Provide fresh air.**After contact with skin**

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

After ingestion

Observe risk of aspiration if vomiting occurs. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Call a doctor if you feel unwell.

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

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings. The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Non-flammable. Vapours can form explosive mixtures with air. In case of fire may be liberated: Carbon dioxide (CO₂). Nitrogen oxides (NO_x).

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General measures**

Consider conventional precautions for chemical handling.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Avoid contact with skin and eyes.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Protect from heat and direct sunlight.
Keep only in the original container in a cool, well-ventilated place.

Hints on joint storage

Do not store together with:

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Reducing agents.
Zinc.
iron.

Further information on storage conditions

Recommended storage temperature: 5-30°C

7.3. Specific end use(s)

Enzymatic cleaner for instruments and medical equipment

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
112-34-5	2-(2-Butoxyethoxy)ethanol	10	67.5		TWA (8 h)	WEL
		15	101.2		STEL (15 min)	WEL
9014-01-1	Subtilisins (Bacillus subtilis Carlsberg)	-	0.00004		TWA (8 h)	WEL

8.2. Exposure controls



Protective and hygiene measures

Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff. Consider conventional precautions for chemical handling.

Eye/face protection

Wear eye/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. 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.

Skin protection

No special measures are necessary.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

No special measures are necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: liquid
Colour: light yellowish
Odour: characteristic
pH-Value (at 20 °C): 8,5

Changes in the physical state

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Melting point:	not applicable
Boiling point or initial boiling point and boiling range:	99,97 °C
Sublimation point:	not known
Softening point:	not applicable
Pour point:	not applicable
Flash point:	not applicable
Sustaining combustion:	Not sustaining combustion

Flammability

Solid/liquid:	not applicable
Gas:	not applicable

Explosive properties

The product is not: Explosive.

Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Auto-ignition temperature:	not applicable

Self-ignition temperature

Solid:	not applicable
Gas:	not applicable

Decomposition temperature:	not determined
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Oxidizing properties

@0902.B091060

Vapour pressure: (at 20 °C)	23,37 hPa
Vapour pressure: (at 50 °C)	123,3 hPa

Density (at 20 °C):	1 g/cm ³
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Water solubility:	completely miscible
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Solubility in other solvents

not determined

Partition coefficient n-octanol/water:	not determined
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Viscosity / kinematic:	not applicable
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Relative vapour density:	not determined
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Evaporation rate:	not determined
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9.2. Other information

Solid content:	not applicable
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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable under storage at normal ambient temperatures.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

not known

10.4. Conditions to avoid

Frost Protect from sunlight.

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Materials to avoid Acid, concentrated

10.5. Incompatible materials

Keine gefährlichen Reaktionen bekannt.

10.6. Hazardous decomposition products

No dangerous decomposition products are known

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.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
69011-36-5	isotridecanol, ethoxylated				
	oral	LD50 mg/kg	500	Rat	

Irritation and corrosivity

Causes serious eye damage.

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

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

Additional information on tests

There are no data available on the preparation/mixture itself.

Practical experience

There are no data available on the preparation/mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

Technically correct releases of minimal concentrations to adapted biological sewage treatment facility, will not disturb the biodegradability of activated sludge.

12.2. Persistence and degradability

The surfactant contained in this mixture complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
69011-36-5	isotridecanol, ethoxylated			
	Biological degradability	90,1	28	OECD 301D

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12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

12.4. Mobility in soil

There are no data available on the preparation/mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.7. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

070699 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; wastes not otherwise specified

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

<u>14.1. UN number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

<u>14.1. UN number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

<u>14.1. UN number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

<u>14.1. UN number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

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14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 55

Information according to 2012/18/EU Not subject to 2012/18/EU (SEVESO III)
(SEVESO III):**Additional information**

Regulation (EC) No. 648/2004 (Detergents regulation).

National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

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

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 2,14.

Abbreviations and acronyms

ADR: Accord européen sur le transport 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

ICAO: International Civil Aviation Organization

P: Marine Pollutant

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

UN: United Nations

DNEL: Derived No Effect Level

DMEL: Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

ATE: Acute toxicity estimate

LL50: Lethal loading, 50%

EL50: Effect loading, 50%

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EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 ADR: Accord européen sur le transport des marchandises dangereuses par Route
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation
 intérieures)
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Eye Dam. 1; H318	Calculation method

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H411 Toxic to aquatic life with long lasting effects.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations. Follow the instructions for use on the label.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)