

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Roti®-Load 1 reducing, 4x conc.

article number: **K929**
Version: **1.0 en**

date of compilation: 2017-05-18

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

1.1 Product identifier

Identification of the substance	Roti®-Load 1
Article number	K929
Registration number (REACH)	not relevant (mixture)

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

Identified uses: laboratory chemical

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

Emergency information service **Poison Centre Munich: +49/(0)89 19240**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification acc. to GHS			
Section	Hazard class	Hazard class and category	Hazard statement
3.1O	acute toxicity (oral)	(Acute Tox. 4)	H302
3.1D	acute toxicity (dermal)	(Acute Tox. 3)	H311
3.1I	acute toxicity (inhal.)	(Acute Tox. 4)	H332
3.2	skin corrosion/irritation	(Skin Irrit. 2)	H315
3.3	serious eye damage/eye irritation	(Eye Dam. 1)	H318
3.4S	skin sensitisation	(Skin Sens. 1)	H317
3.9	specific target organ toxicity - repeated exposure	(STOT RE 2)	H373
4.1C	hazardous to the aquatic environment - chronic hazard	(Aquatic Chronic 2)	H411

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2.2 Label elements

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

Signal word

Danger

Pictograms



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 through prolonged or repeated exposure
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: sodium dodecyl sulphate, 2-Mercaptoethanol

Labelling of packages where the contents do not exceed 125 ml

Signal word: **Danger**

Symbol(s)



H311	Toxic in contact with skin.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
P280	Wear protective gloves/eye protection.
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.
contains:	Sodium dodecyl sulphate, 2-Mercaptoethanol

2.3 Other hazards

There is no additional information.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

Composition/information on ingredients.

Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms	Specific Conc. Limits
2-Mercaptoethanol	CAS No 60-24-2 EC No 200-464-6 REACH Reg. No 01-2119517582- 41-xxxx	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 sulphate	CAS No 151-21-3 EC No 205-788-1 REACH Reg. No 01-2119489461- 32-xxxx	5 - < 10	Flam. Sol. 2 / H228 Acute Tox. 4 / H302 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 STOT SE 3 / H335 Aquatic Chronic 3 / H412		Eye Dam. 1; H318: C ≥ 20 % Eye Irrit. 2; H319: 10 % ≤ C < 20 %

Remarks

For full text of Hazard- and EU Hazard-statements: 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.

Following inhalation

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

Following skin contact

After contact with skin, wash immediately with plenty of water. In case of extensive skin contact serious poisoning possible. Call a physician in any case.

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 immediately and drink plenty of water. Call a doctor.

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4.2 Most important symptoms and effects, both acute and delayed

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

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 fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Ingredients of the mixture Combustible.

Hazardous combustion products

in case of fire and/or explosion do not breathe fumes

5.3 Advice for firefighters

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

Do not breathe vapour/spray. Avoid contact with skin and eyes. Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains.

Advices on how to clean up a spill

Absorb with liquid-binding material (e.g. 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.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provide adequate ventilation as well as local exhaust at critical locations. Avoid exposure. Handle and open container with care. When not in use, keep containers tightly closed.

Advice on general occupational hygiene

Thorough skin-cleansing after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

Store locked up.

• Ventilation requirements

Use local and general ventilation.

• 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	Notation	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Source
IE	glycerol	56-81-5	mist	OELV		10			S.I. No. 619 of 2001

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

Relevant DNELs/DMELs/PNECs and other threshold levels

• relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
2-Mercaptoethanol	60-24-2	DNEL	0,6 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
2-Mercaptoethanol	60-24-2	DNEL	4 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
sodium dodecyl sulphate	151-21-3	DNEL	4.060 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
sodium dodecyl sulphate	151-21-3	DNEL	285 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects

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• relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment	Exposure time
2-Mercaptoethanol	60-24-2	PNEC	0,006 mg/l	freshwater	short-term (single instance)
2-Mercaptoethanol	60-24-2	PNEC	0,001 mg/l	marine water	short-term (single instance)
2-Mercaptoethanol	60-24-2	PNEC	60 mg/l	sewage treatment plant (STP)	short-term (single instance)
2-Mercaptoethanol	60-24-2	PNEC	0,024 mg/kg	freshwater sediment	short-term (single instance)
2-Mercaptoethanol	60-24-2	PNEC	0,002 mg/kg	marine sediment	short-term (single instance)
2-Mercaptoethanol	60-24-2	PNEC	0,001 mg/kg	soil	short-term (single instance)
sodium dodecyl sulphate	151-21-3	PNEC	0,176 mg/l	freshwater	short-term (single instance)
sodium dodecyl sulphate	151-21-3	PNEC	0,0176 mg/l	marine water	short-term (single instance)
sodium dodecyl sulphate	151-21-3	PNEC	0,697 mg/kg	marine sediment	short-term (single instance)
sodium dodecyl sulphate	151-21-3	PNEC	6,97 mg/kg	freshwater sediment	short-term (single instance)
sodium dodecyl sulphate	151-21-3	PNEC	1,35 mg/l	sewage treatment plant (STP)	short-term (single instance)
sodium dodecyl sulphate	151-21-3	PNEC	1,29 mg/kg	soil	short-term (single instance)
sodium dodecyl sulphate	151-21-3	PNEC	0,055 mg/l	water	intermittent release

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.

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- **type of material**

Butyl caoutchouc (butyl rubber)

- **material thickness**

0,7mm

- **breakthrough times of the glove material**

>480 minutes (permeation: level 6)

- **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: B-P2 (combined filters for acidic gases and particles, colour code: Grey/White).

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

Appearance

Physical state	liquid (fluid)
Colour	dark blue
Odour	disagreeable like rotten eggs
Odour threshold	No data available

Other physical and chemical parameters

pH (value)	6 – 7 (20 °C)
Melting point/freezing point	not determined
Initial boiling point and boiling range	This information is not available.
Flash point	not determined
Evaporation rate	no data available
Flammability (solid, gas)	not relevant (fluid)
<u>Explosive limits</u>	
• lower explosion limit (LEL)	this information is not available
• upper explosion limit (UEL)	this information is not available
Explosion limits of dust clouds	not relevant
Vapour pressure	This information is not available.
Density	1,1 – 1,2 g/cm ³ at 20 °C
Vapour density	This information is not available.
Bulk density	Not applicable
Relative density	Information on this property is not available.

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Solubility(ies)

Water solubility miscible in any proportion

Partition coefficient

n-octanol/water (log KOW) This information is not available.

Auto-ignition temperature Information on this property is not available.

Decomposition temperature no data available

Viscosity not determined

Explosive properties Shall not be classified as explosive

Oxidising properties none

9.2 Other information

There is no additional information.

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, Strong acid, Perchlorates

10.4 Conditions to avoid

Keep away from heat.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

• Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	ATE
2-Mercaptoethanol	60-24-2	oral	98 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 sulphate	151-21-3	oral	1.200 mg/kg
sodium dodecyl sulphate	151-21-3	inhalation: dust/mist	1,5 mg/l/4h

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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. May cause sensitization by skin contact.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor 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 through prolonged or repeated exposure.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

gastrointestinal complaints, nausea, vomiting

• If in eyes

Causes serious eye damage, risk of blindness

• If inhaled

data are not available

• If on skin

causes skin irritation, Allergic reactions, risk of absorption via the skin

Other information

None

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
2-Mercaptoethanol	60-24-2	EC50	0,4 mg/l	daphnia magna	48 h
2-Mercaptoethanol	60-24-2	EC50	19 mg/l	Grünalge	72 h
2-Mercaptoethanol	60-24-2	LC50	37 mg/l	orfe (Leuciscus idus)	96 h
2-Mercaptoethanol	60-24-2	ErC50	19 mg/l	Grünalge	72 h
sodium dodecyl sulphate	151-21-3	LC50	29 mg/l	fish	96 h
sodium dodecyl sulphate	151-21-3	ErC50	4,8 mg/l	algae	72 h

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Name of substance	CAS No	Endpoint	Value	Species	Exposure time
sodium dodecyl sulphate	151-21-3	EC50	53 mg/l	algae	72 h

Aquatic toxicity (chronic)

May cause long-term adverse effects in the aquatic environment.

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
2-Mercaptoethanol	60-24-2	EC50	125 mg/l	microorganisms	17 h
sodium dodecyl sulphate	151-21-3	EC50	135 mg/l	microorganisms	3 h

12.2 Process of degradability

Data are not available.

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time
2-Mercaptoethanol	60-24-2	biotic/abiotic	<10 %	28 d
sodium dodecyl sulphate	151-21-3	biotic/abiotic	90 %	28 d
sodium dodecyl sulphate	151-21-3	carbon dioxide generation	95 %	28 d

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
2-Mercaptoethanol	60-24-2		-0,056 (25 °C)	55,4
sodium dodecyl sulphate	151-21-3		1,6	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

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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.

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.

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.

SECTION 14: Transport information

14.1	UN number	2810
14.2	UN proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S.
	Hazardous ingredients	2-Mercaptoethanol, Sodium dodecyl sulphate
14.3	Transport hazard class(es)	
	Class	6.1 (toxic substances)
14.4	Packing group	III (substance presenting low danger)
14.5	Environmental hazards	hazardous to the aquatic environment (2-Mercaptoethanol)
14.6	Special precautions for user	
	Provisions for dangerous goods (ADR) should be complied within the premises.	
14.7	Transport in bulk according to Annex II of MARPOL and the IBC Code	
	The cargo is not intended to be carried in bulk.	
14.8	Information for each of the UN Model Regulations	
	• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)	
	UN number	2810
	Proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S.
	Particulars in the transport document	UN2810, TOXIC LIQUID, ORGANIC, N.O.S., (contains: 2-Mercaptoethanol, sodium dodecyl sulphate), 6.1, III, (E), environmentally hazardous
	Class	6.1
	Classification code	T1
	Packing group	III
	Danger label(s)	6.1 + "fish and tree"

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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
Tunnel restriction code (TRC)	E
Hazard identification No	60

• International Maritime Dangerous Goods Code (IMDG)

UN number	2810
Proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S.
Particulars in the shipper's declaration	UN2810, TOXIC LIQUID, ORGANIC, N.O.S., (contains: 2-Mercaptoethanol, sodium dodecyl sulphate), 6.1, III, MARINE POLLUTANT
Class	6.1
Marine pollutant	yes (hazardous to the aquatic environment)
Packing group	III
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)

UN number	2810
Proper shipping name	Toxic liquid, organic, n.o.s.
Particulars in the shipper's declaration	UN2810, Toxic liquid, organic, n.o.s., (contains: 2-Mercaptoethanol, sodium dodecyl sulphate), 6.1, III
Class	6.1
Environmental hazards	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	6.1

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Special provisions (SP)	A3, A4, A137, 274
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)

- **Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)**

None of the ingredients are listed.

- **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**

None of the ingredients are listed.

- **Regulation 850/2004/EC on persistent organic pollutants (POP)**

None of the ingredients are listed.

- **Restrictions according to REACH, Annex XVII**

None of the ingredients are listed.

Name of substance	CAS No	Wt%	Type of registration	No
Roti®-Load 1		100	1907/2006/EC annex XVII	3

- **List of substances subject to authorisation (REACH, Annex XIV)**

None of the ingredients are listed.

- **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

- **Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)**

VOC content 25,92 %

- **Directive on industrial emissions (VOCs, 2010/75/EU)**

VOC content 19,1 %

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Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

None of the ingredients are listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

None of the ingredients are listed.

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European 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)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
COD	chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
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)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
Eye Dam.	seriously damaging to the eye
Eye Irrit.	irritant to the eye
Flam. Sol.	flammable solid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association

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Abbr.	Descriptions of used abbreviations
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	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
log KOW	n-octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
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)
S.I. No. 619 of 2001	Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001
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
STOT SE	specific target organ toxicity - single exposure
TWA	time-weighted average
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

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

Code	Text
H228	flammable solid
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

Safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



Roti®-Load 1 reducing, 4x conc.

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Code	Text
H318	causes serious eye damage
H331	toxic if inhaled
H332	harmful if inhaled
H335	may cause respiratory irritation
H373	may cause damage to organs through prolonged or repeated exposure
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

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. 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.