Safety Data Sheet

according to Regulation (EC) No 1907/2006

HIGHTEC VDL 46 SYNTH

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

1.1. Product identifier

HIGHTEC VDL 46 SYNTH

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

1.3. Details of the supplier of the safety data sheet

Company name:	ROWE Mineralölwerk GmbH	
Street:	Langgewann 101	
Place:	D-67547 Worms	
Telephone:	+49 (0)6241 5906-0	Telefax: +49 (0)6241 5906-999
E-mail:	info@rowe-oil.com	
Contact person:	Product Compliance	
E-mail:	sdb@rowe-oil.com	
Internet:	www.rowe-oil.com	

1.4. Emergency telephone number:

Ireland: Public (8am-10pm) +353 180 921 66, Healthcare Professionals +353 1809 2566 other Countries: Emergency CONTACT (24-Hour-Number): GBK GmbH +49 (0)6132-84463

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard statements

H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P103	Read carefully and follow all instructions.
P273	Avoid release to the environment.
P501	Dispose of contents/container to of the disposal according to local regulations.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
112-41-4	1-Dodecene			60 - < 100 %
	203-968-4		01-2119475509-26	
	Asp. Tox. 1; H304 EUH066			
128-39-2	2,6-di-tert-butylphenol			0.3 - < 1 %
	204-884-0		01-2119490822-33	
	Skin Irrit. 2, Aquatic Acute 1, Aquatic Chronic 1; H315 H400 H410			
	Reaction mass of 1H-Benzotriazole-1-methanamine, N, N-bis (2-ethylhexyl) -6-methyl- and 2H-Benzotriazole-2-methanamine, N, N-bis (2-ethylhexyl) -5-methyl- and N, N-bis (2-ethylhexyl) -4-methyl-1H-benzotriazole-1-methylamine and 2H-benzotriazole-2-methanamine, N, N-bis (2-ethylhexyl) -4-methyl- and N, N-bis (2-ethylhexyl) -5-methyl-1H-benzotriazole-1-methylamine (international CAS 80595-74-0/80584-90-3)			0.1 - < 0.3 %
	939-700-4		01-2119982395-25	
	Skin Irrit. 2, Skin Sens. 1B, Aquatic Acute 1, Aquatic Chronic 2; H315 H317 H400 H411			
68478-81-9	Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9–C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione			0.1 - < 0.3 %
	947-263-6		01-2120761103-66	
	Repr. 2, Skin Irrit. 2, Aquatic Chronic 4; H361fd H315 H413			

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		
112-41-4	203-968-4	1-Dodecene	60 - < 100 %
	inhalation: LC50 = >5 mg/l (dusts or mists); dermal: LD50 = >2000 mg/kg; oral: LD50 = >5000 mg/kg		
128-39-2	204-884-0	2,6-di-tert-butylphenol	0.3 - < 1 %
	oral: LD50 = > 5000 mg/kg Aquatic Acute 1; H400: M=1 Aquatic Chronic 1; H410: M=1		
	939-700-4	Reaction mass of 1H-Benzotriazole-1-methanamine, N, N-bis (2-ethylhexyl) -6-methyl- and 2H-Benzotriazole-2-methanamine, N, N-bis (2-ethylhexyl) -5-methyl- and N, N-bis (2-ethylhexyl) -4-methyl-1H-benzotriazole-1-methylamine and 2H-benzotriazole-2-methanamine, N, N-bis (2-ethylhexyl) -4-methyl- and N, N-bis (2-ethylhexyl) -5-methyl-1H-benzotriazole-1-methylamine (international CAS 80595-74-0/80584-90-3)	0.1 - < 0.3 %
	oral: LD50 = 3313 mg/kg Aquatic Acute 1; H400: M=1		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice.

After inhalation

Provide fresh air. If experiencing respiratory symptoms: Call a doctor.

After contact with skin

Take off contaminated clothing and wash it before reuse. After contact with skin, wash immediately with plenty of water and soap. In case of skin reactions, consult a physician.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an

ophthalmologist.

After ingestion

Observe risk of aspiration if vomiting occurs. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

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

No information available.

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

Water spray jet. Foam. Carbon dioxide (CO2).
Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

Combustible. Non-flammable.
In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO2), Pyrolysis products, toxic.

5.3. Advice for firefighters

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

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 advice

Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

For non-emergency personnel

Provide adequate ventilation. Use personal protection equipment. Remove persons to safety.

For emergency responders

Wear personal protection equipment (refer to section 8).

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment.

6.3. Methods and material for containment and cleaning up

For containment

Prevent spread over a wide area (e.g. by containment or oil barriers). Cover drains. Stop leak if safe to do so.

For cleaning up

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.

Other information

Clean contaminated articles and floor according to the environmental legislation.

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

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with eyes and skin. Use personal protection equipment.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff.

Further information on handling

maximum process temperature: 100 °C

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

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

Hints on joint storage

Do not store together with: Oxidizing agent, Reducing agent, Strong acid, Strong alkali.

Further information on storage conditions

Keep away from heat.
maximum storage temperature: 80 °C

7.3. Specific end use(s)

Lubricating agent, Additive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
128-39-2	2,6-di-tert-butylphenol			
Worker DNEL, long-term		inhalation	systemic	70,61 mg/m³
Worker DNEL, long-term		dermal	systemic	11,25 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	20,9 mg/m³
Consumer DNEL, long-term		dermal	systemic	6,75 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	6,75 mg/kg bw/day
	Reaction mass of 1H-Benzotriazole-1-methanamine, N, N-bis (2-ethylhexyl) -6-methyl- and 2H-Benzotriazole-2-methanamine, N, N-bis (2-ethylhexyl) -5-methyl- and N, N-bis (2-ethylhexyl) -4-methyl-1H-benzotriazole-1-methylamine and 2H-benzotriazole-2-methanamine, N, N-bis (2-ethylhexyl) -4-methyl- and N, N-bis (2-ethylhexyl) -5-methyl-1H-benzotriazole-1-methylamine (international CAS 80595-74-0/80584-90-3)			
Worker DNEL, long-term		inhalation	systemic	1,3 mg/m³
Worker DNEL, long-term		dermal	systemic	0,4 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,3 mg/m³
Consumer DNEL, long-term		dermal	systemic	0,2 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,2 mg/kg bw/day
68478-81-9	Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9–C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione			
Worker DNEL, long-term		inhalation	systemic	3,72 mg/m³
Worker DNEL, long-term		dermal	systemic	1,04 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	1,1 mg/m³
Consumer DNEL, long-term		dermal	systemic	0,625 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,625 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment		Value
128-39-2	2,6-di-tert-butylphenol	
Freshwater		0,001 mg/l
Freshwater (intermittent releases)		0,004 mg/l
Marine water		0 mg/l
Freshwater sediment		0,317 mg/kg
Marine sediment		0,032 mg/kg
Secondary poisoning		60 mg/kg
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		0,697 mg/kg
	Reaction mass of 1H-Benzotriazole-1-methanamine, N, N-bis (2-ethylhexyl) -6-methyl- and 2H-Benzotriazole-2-methanamine, N, N-bis (2-ethylhexyl) -5-methyl- and N, N-bis (2-ethylhexyl) -4-methyl-1H-benzotriazole-1-methylamine and 2H-benzotriazole-2-methanamine, N, N-bis (2-ethylhexyl) -4-methyl- and N, N-bis (2-ethylhexyl) -5-methyl-1H-benzotriazole-1-methylamine (international CAS 80595-74-0/80584-90-3)	
Freshwater		0,001 mg/l
Freshwater (intermittent releases)		0,01 mg/l
Marine water		0 mg/l
Micro-organisms in sewage treatment plants (STP)		0,69 mg/l
68478-81-9	Reaction products of fatty acids, C16-18, C18 unsatd. with Amines, polyethylenepoly-, triethylenetetramine fraction and 3-(C9–C15, C12 rich, alk-1-enyl)dihydro-2,5-furandione	
Freshwater		0,496 mg/l
Freshwater (intermittent releases)		4,96 mg/l
Marine water		0,05 mg/l
Freshwater sediment		3772830,55 mg/kg
Marine sediment		377283,06 mg/kg
Secondary poisoning		5 mg/kg
Micro-organisms in sewage treatment plants (STP)		100 mg/l
Soil		3935351,65 mg/kg

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls

Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye protection/face protection. (EN 166)

Hand protection

Tested protective gloves must be worn (EN ISO 374)

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

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Thermal hazards

No information available.

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	yellow
Odour:	characteristic
Odour threshold:	not determined

		Test method
Melting point/freezing point:	not determined	
Boiling point or initial boiling point and boiling range:	not determined	
Flammability:	Not readily combustible.	
Lower explosion limits:	not determined	
Upper explosion limits:	not determined	
Flash point:	>230 °C	ASTM D 92
Auto-ignition temperature:	not determined	
Decomposition temperature:	not determined	
pH-Value (at 20 °C):	6	DIN 51369
Viscosity / kinematic: (at 40 °C)	~ 42,4 mm²/s	ASTM D 445
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.	

Solubility in other solvents

not determined

Partition coefficient n-octanol/water:	not determined	
Vapour pressure:	not determined	
Density (at 20 °C):	~ 0,833 g/cm³	DIN 51757
Relative vapour density:	not determined	
Particle characteristics:	not relevant	

9.2. Other information

Other safety characteristics

Pour point:	~ -50 °C

Further Information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

Oxidizing agent, Reducing agent, Strong acid, Strong alkali.

10.6. Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO2), Pyrolysis products, toxic.

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.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
112-41-4	1-Dodecene				
	oral	LD50 >5000 mg/kg	Rat		
	dermal	LD50 >2000 mg/kg	Rat		
	inhalation (4 h) dust/mist	LC50 >5 mg/l	Rat		
128-39-2	2,6-di-tert-butylphenol				
	oral	LD50 > 5000 mg/kg	Rat	ECHA	OECD Guideline 401
	Reaction mass of 1H-Benzotriazole-1-methanamine, N, N-bis (2-ethylhexyl) -6-methyl- and 2H-Benzotriazole-2-methanamine, N, N-bis (2-ethylhexyl) -5-methyl- and N, N-bis (2-ethylhexyl) -4-methyl-1H-benzotriazole-1-methylamine and 2H-benzotriazole-2-methanamine, N, N-bis (2-ethylhexyl) -4-methyl- and N, N-bis (2-ethylhexyl) -5-methyl-1H-benzotriazole-1-methylamine (international CAS 80595-74-0/80584-90-3)				
	oral	LD50 3313 mg/kg	Rat	ECHA	OECD Guideline 401

Irritation and corrosivity

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

Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: 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.

Information on likely routes of exposure

Inhalation, oral, Skin contact, Eye contact.

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information

No information available.

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic life with long lasting effects.

Harmful to aquatic life with long lasting effects.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
112-41-4	1-Dodecene						
	Acute fish toxicity	LC50 mg/l	>1000	96 h	Oncorhynchus mykiss (Rainbow trout)		
	Acute algae toxicity	ErC50 mg/l	>1000	96 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50 mg/l	>1000	48 h	Daphnia magna		
	Crustacea toxicity	NOEC	125 mg/l	21 d	Daphnia magna		
128-39-2	2,6-di-tert-butylphenol						
	Acute crustacea toxicity	EC50 mg/l	0,45	48 h	Daphnia magna	REACh Registration Dossier	
	Crustacea toxicity	NOEC mg/l	0,035	21 d	Daphnia magna	REACh Registration Dossier	OECD Guideline 211

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
128-39-2	2,6-di-tert-butylphenol	4,5
	Reaction mass of 1H-Benzotriazole-1-methanamine, N, N-bis (2-ethylhexyl) -6-methyl- and 2H-Benzotriazole-2-methanamine, N, N-bis (2-ethylhexyl) -5-methyl- and N, N-bis (2-ethylhexyl) -4-methyl-1H-benzotriazole-1-methylamine and 2H-benzotriazole-2-methanamine, N, N-bis (2-ethylhexyl) -4-methyl- and N, N-bis (2-ethylhexyl) -5-methyl-1H-benzotriazole-1-methylamine (international CAS 80595-74-0/80584-90-3)	6,56

BCF

CAS No	Chemical name	BCF	Species	Source
128-39-2	2,6-di-tert-butylphenol	135 - 360	Cyprinus carpio	ECHA
	Reaction mass of 1H-Benzotriazole-1-methanamine, N, N-bis (2-ethylhexyl) -6-methyl- and 2H-Benzotriazole-2-methanamine, N, N-bis (2-ethylhexyl) -5-methyl- and N, N-bis (2-ethylhexyl) -4-methyl-1H-benzotriazole-1-methylamine and 2H-benzotriazole-2-methanamine, N, N-bis (2-ethylhexyl) -4-methyl- and N, N-bis (2-ethylhexyl) -5-methyl-1H-benzotriazole-1-methylamine (international CAS 80595-74-0/80584-90-3)	1676		EPIWIN (2011)

12.4. Mobility in soil

The product has not been tested.

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.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

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

130206 OIL WASTES AND WASTES OF LIQUID FUELS (EXCEPT EDIBLE OILS, AND THOSE IN CHAPTERS 05, 12 AND 19); waste engine, gear and lubricating oils; synthetic engine, gear and lubricating oils; hazardous waste

List of Wastes Code - used product

130206 OIL WASTES AND WASTES OF LIQUID FUELS (EXCEPT EDIBLE OILS, AND THOSE IN CHAPTERS 05, 12 AND 19); waste engine, gear and lubricating oils; synthetic engine, gear and lubricating oils; hazardous waste

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)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.

14.4. Packing group: No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

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

Marine transport (IMDG)

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

Air transport (ICAO-TI/IATA-DGR)

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

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

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 75

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

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

Additional information

Observe in addition any national regulations!

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): 2,4,5,6,7,8,9,10,11,13,15,16.

Abbreviations and acronyms

Asp. Tox. 1: Aspiration hazard, hazard category 1
Skin Irrit. 2: Skin irritation, hazard category 2
Skin Sens. 1B: Skin sensitisation, hazard category 1B
Repr. 2: Reproductive toxicity, hazard category 2
Aquatic Acute 1: Hazardous to the aquatic environment, hazard category: Acute 1
Aquatic Chronic 1: Hazardous to the aquatic environment, long-term hazard category: Chronic 1
Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard category: Chronic 2
Aquatic Chronic 3: Hazardous to the aquatic environment, long-term hazard category: Chronic 3
Aquatic Chronic 4: Hazardous to the aquatic environment, long-term hazard category: Chronic 4
ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
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%
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
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
ICAO: International Civil Aviation Organization
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: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

Key literature references and sources for data

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations). (v.1.2, 2013)

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

Classification	Classification procedure
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
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.
H413	May cause long lasting harmful effects to aquatic life.
EUH066	Repeated exposure may cause skin dryness or cracking.

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.

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