Safety Data Sheet

according to Regulation (EC) No 1907/2006

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

1.1. Product identifier

Crystal Coating

UFI: 8W11-CYAY-M100-2TJV

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

Use of the substance/mixture

Automotive care products

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name:	Waxoyl AG
Street:	Mühlemattstrasse 24
Place:	CH-4104 Oberwil
Telephone:	+41 61 281 77 94
E-mail:	info@waxoyl.ch
Internet:	www.waxoyl.com

Supplier

Company name:	Waxoyl GmbH
Street:	Hermann-Albertz-Str. 17-23
Place:	D-46045 Oberhausen
Telephone:	+49 208 41 02 21

1.4. Emergency telephone number:

112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Flam. Liq. 2; H225
Water-react. 3; H261
Acute Tox. 4; H302
Skin Corr. 1B; H314
Eye Dam. 1; H318
Skin Sens. 1; H317
Asp. Tox. 1; H304
Aquatic Chronic 4; H413

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics
Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanamine
Hydrocarbons, C11-C14, isoalkanes, cyclics, <2% aromatics
3-aminopropyltriethoxysilane

Signal word: Danger

Pictograms:



Hazard statements

H225	Highly flammable liquid and vapour.
H261	In contact with water releases flammable gases.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H413	May cause long lasting harmful effects to aquatic life.
EUH014	Reacts violently with water.
EUH029	Contact with water liberates toxic gas.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P260	Do not breathe gas.
P280	Wear protective gloves/protective clothing and eye protection/face protection.
P405	Store locked up.
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

2.3. Other hazards

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

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)			
	Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics			35 - < 40 %
	918-167-1		01-2119472146-39	
	Flam. Liq. 3, Asp. Tox. 1, Aquatic Chronic 4; H226 H304 H413 EUH066			
475645-84-2	Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanamine			20 - < 25 %
	Flam. Liq. 2, Water-react. 3, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, Aquatic Chronic 3; H225 H261 H301 H314 H318 H412 EUH014 EUH029			
	Hydrocarbons, C11-C14, isoalkanes, cyclics, <2% aromatics			15 - < 20 %
	927-285-2		01-2119480162-45	
	Asp. Tox. 1; H304 EUH066			
123-86-4	n-butyl acetate			10 - < 15 %
	204-658-1	607-025-00-1	01-2119485493-29	
	Flam. Liq. 3, STOT SE 3; H226 H336 EUH066			
919-30-2	3-aminopropyltriethoxysilane			5 - < 10 %
	213-048-4	612-108-00-0	01-2119480479-24	
	Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1; H302 H314 H318 H317			

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		

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
	918-167-1	Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics	35 - < 40 %
	inhalation: LC50 = 9,3 mg/l (dusts or mists); dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 15000 mg/kg		
475645-84-2		Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanamine	20 - < 25 %
	oral: LD50 = 300 - 2000 mg/kg		
123-86-4	204-658-1	n-butyl acetate	10 - < 15 %
	inhalation: LC50 = > 21,1 mg/l (vapours); dermal: LD50 = > 14000 mg/kg; oral: LD50 = > 10000 mg/kg		
919-30-2	213-048-4	3-aminopropyltriethoxysilane	5 - < 10 %
	dermal: LD50 = 3800 mg/kg; oral: LD50 = 1780 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection!
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

Remove mechanically (e.g. dab away using wadding or cellulose material) then thoroughly wash the affected skin with a mild cleansing agent and water. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

After contact with eyes

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. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Observe risk of aspiration if vomiting occurs. Do NOT induce vomiting. If swallowed, rinse mouth with water (only if the person is conscious). When in doubt or if symptoms are observed, get medical advice.

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

Allergic reactions

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 mist.
Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Highly flammable liquid and vapour. Vapours can form explosive mixtures with air.
In contact with water releases flammable gases. (Hydrogen, Ammonia (NH3))
In case of fire may be liberated: Pyrolysis products, toxic. (Carbon monoxide),

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. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

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.

For emergency responders

Personal protection equipment: see section 8

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment

Stop leak if safe to do so. Cover drains.

For cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.
Ventilate affected area. Do not rinse down with water. (Formation of: Ammonia (NH3), Hydrogen)

Other information

Use non-sparking tools.
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 skin, eyes and clothes. Use personal protection equipment.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Use only antistatically equipped (spark-free) tools.

Advice on general occupational hygiene

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

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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.

Further information on storage conditions

Keep away from heat. Protect against direct sunlight. Protect from moisture.

7.3. Specific end use(s)

Automotive care products

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values

CAS No	Name of agent	ppm	mg/m³	fib/cm³	Category	Origin
7664-41-7	Ammonia anhydrous	20	14		TWA (8 h)	
		50	36		STEL (15 min)	
123-86-4	n-Butyl acetate	50	241		TWA (8 h)	
		150	723		STEL (15 min)	

DNEL/DMEL values

CAS No	Name of agent			
DNEL type		Exposure route	Effect	Value
123-86-4	n-butyl acetate			
Worker DNEL, long-term		inhalation	local	300 mg/m³
Worker DNEL, acute		inhalation	systemic	600 mg/m³
Worker DNEL, acute		inhalation	local	600 mg/m³
Worker DNEL, long-term		inhalation	systemic	48 mg/m³
Worker DNEL, long-term		dermal	systemic	7 mg/kg bw/day
Worker DNEL, acute		dermal	systemic	11 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	35,7 mg/m³
Consumer DNEL, long-term		inhalation	systemic	12 mg/m³
Consumer DNEL, acute		inhalation	systemic	300 mg/m³
Consumer DNEL, acute		inhalation	local	300 mg/m³
Consumer DNEL, acute		oral	systemic	2 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	3,4 mg/kg bw/day
Consumer DNEL, acute		dermal	systemic	6 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	2 mg/kg bw/day
919-30-2	3-aminopropyltriethoxysilane			
Worker DNEL, long-term		inhalation	systemic	14 mg/m³
Worker DNEL, long-term		dermal	systemic	2 mg/kg bw/day

PNEC values

CAS No	Name of agent	
Environmental compartment		Value
123-86-4	n-butyl acetate	
Freshwater		0,18 mg/l
Freshwater (intermittent releases)		0,36 mg/l
Marine water		0,018 mg/l
Freshwater sediment		0,981 mg/kg
Marine sediment		0,0981 mg/kg
Microorganisms in sewage treatment plants (STP)		35,6 mg/l
Soil		0,0903 mg/kg
919-30-2	3-aminopropyltriethoxysilane	
Freshwater		0,5 mg/l
Freshwater (intermittent releases)		2,05 mg/l
Marine water		0,05 mg/l
Freshwater sediment		1,8 mg/kg
Marine sediment		0,18 mg/kg
Microorganisms in sewage treatment plants (STP)		0,81 mg/l
Soil		0,069 mg/kg

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 ISO 16321 (EN 166)

Hand protection

Wear suitable gloves. (DIN EN 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. Flame-retardant protective clothing. Wear anti-static footwear and clothing

Respiratory protection

Respiratory protection necessary at: insufficient ventilation, aerosol or mist formation, exceeding exposure limit values

Thermal hazards

Flame-retardant protective clothing. Wear anti-static footwear and clothing

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:	Flüssig
Colour:	colourless
Odour:	like: Ammonia (NH3)
Odour threshold:	not determined
Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not determined
Flammability:	Highly flammable liquid and vapour.
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	< 21 °C
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value:	not determined
Viscosity / kinematic:	not determined
Water solubility:	Reacts with :

Solubility in other solvents

not determined

Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not determined
Density:	1 g/cm³
Relative vapour density:	not determined
Particle characteristics:	not applicable

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

Vapours can form explosive mixtures with air.

Further Information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Vapours can form explosive mixtures with air.
Reacts with : Formation of: Ammonia (NH3). Hydrogen.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Protect against direct sunlight.
Protect from moisture.

10.5. Incompatible materials

Oxidizing agent. Pyrophoric or self-heating substances.

10.6. Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide, , Pyrolysis products, toxic.
In contact with water releases flammable gases. (Hydrogen, Ammonia (NH3))

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Harmful if swallowed.
Contact with water liberates toxic gas.

ATEmix calculated

ATE (oral) 1285 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
	Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics				
	oral	LD50 > 15000 mg/kg	Rat	Manufacturer	
	dermal	LD50 > 5000 mg/kg	Rabbit	Manufacturer	
	inhalation (4 h) dust/mist	LC50 9,3 mg/l	Rat	Manufacturer	
475645-84-2	Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanamine				
	oral	LD50 300 - 2000 mg/kg	Rat	Manufacturer	
123-86-4	n-butyl acetate				
	oral	LD50 > 10000 mg/kg	Rat	Manufacturer	
	dermal	LD50 > 14000 mg/kg	Rabbit	Manufacturer	
	inhalation (4 h) vapour	LC50 > 21,1 mg/l	Rat	Manufacturer	OECD 403

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
919-30-2	3-aminopropyltriethoxysilane				
	oral	LD50 1780 mg/kg	Rat	Manufacturer	
	dermal	LD50 3800 mg/kg	Rabbit	Manufacturer	

Irritation and corrosivity

Skin corrosion/irritation: Causes severe skin burns and eye damage.
Serious eye damage/eye irritation: Causes serious eye damage.

Sensitising effects

May cause an allergic skin reaction. (3-aminopropyltriethoxysilane)

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

May be fatal if swallowed and enters airways.

Information on likely routes of exposure

Eye contact, Skin contact, oral
aerosol or mist formation: Inhalation

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.

SECTION 12: Ecological information

12.1. Toxicity

May cause long lasting harmful effects to aquatic life.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h][d]	Species	Source	Method
475645-84-2	Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanamine					
	Acute fish toxicity	LC50 57,1 mg/l	96 h	Brachydanio rerio (zebra-fish)	Manufacturer	
123-86-4	n-butyl acetate					
	Acute fish toxicity	LC50 18 mg/l	96 h	Pimephales promelas (fathead minnow)	Manufacturer	
	Acute algae toxicity	ErC50 648 mg/l	72 h	Desmodesmus subspicatus	Manufacturer	
	Acute crustacea toxicity	EC50 44 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	
	Crustacea toxicity	NOEC 23 mg/l	21 d	Daphnia magna (Big water flea)	Manufacturer	

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]|[d]	Species	Source	Method
919-30-2	3-aminopropyltriethoxysilane					
	Acute fish toxicity	LC50 934 mg/l	96 h	Brachydanio rerio (zebra-fish)	Manufacturer	OECD 203
	Acute algae toxicity	ErC50 603 mg/l	72 h	Desmodesmus subspicatus	Manufacturer	
	Acute crustacea toxicity	EC50 331 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	OECD 202

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
123-86-4	n-butyl acetate			
	Regulation (EC) No. 440/2008, Annex, C.5 (BOD)	80 %	5	Manufacturer
	Readily biodegradable (according to OECD criteria).			
919-30-2	3-aminopropyltriethoxysilane			
	Aerobic biological treatment	67 %	28	Manufacturer
	Not readily biodegradable (according to OECD criteria)			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
123-86-4	n-butyl acetate	1,82
919-30-2	3-aminopropyltriethoxysilane	0,31

BCF

CAS No	Chemical name	BCF	Species	Source
919-30-2	3-aminopropyltriethoxysilane	3,4	Cyprinus carpio (Common Carp)	Manufacturer

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

Avoid release to the environment.

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.

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:	UN 3129
14.2. UN proper shipping name:	WATER-REACTIVE LIQUID, CORROSIVE, N.O.S. (Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanamine)
14.3. Transport hazard class(es):	4.3
14.4. Packing group:	II
Hazard label:	4.3+8
Classification code:	WC1
Special Provisions:	274
Limited quantity:	500 mL
Excepted quantity:	E0
Transport category:	0
Hazard No:	382
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 3129
14.2. UN proper shipping name:	WATER-REACTIVE LIQUID, CORROSIVE, N.O.S. (Cyclosilazanes, di-Me, Me hydrogen, polymers with di-Me, Me hydrogen silazanes, reaction products with 3-(triethoxysilyl)-1-propanamine)
14.3. Transport hazard class(es):	4.3
14.4. Packing group:	II
Hazard label:	4.3+8
Classification code:	WC1
Special Provisions:	274
Limited quantity:	500 mL
Excepted quantity:	E0

Marine transport (IMDG)

14.1. UN number or ID number:	UN 3129
14.2. UN proper shipping name:	WATER-REACTIVE LIQUID, CORROSIVE, N.O.S. (CYCLOSILAZANES)
14.3. Transport hazard class(es):	4.3
14.4. Packing group:	II
Hazard label:	4.3+8
Special Provisions:	274
Limited quantity:	0
Excepted quantity:	E0
EmS:	F-G, S-N

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 3129
14.2. UN proper shipping name:	WATER-REACTIVE LIQUID, CORROSIVE, N.O.S. (CYCLOSILAZANES)
14.3. Transport hazard class(es):	4.3
14.4. Packing group:	II
Hazard label:	4.3+8
Special Provisions:	A3 A803
Limited quantity Passenger:	Forbidden

Passenger LQ:	Forbidden
Excepted quantity:	E0
IATA-packing instructions - Passenger:	Forbidden
IATA-max. quantity - Passenger:	Forbidden
IATA-packing instructions - Cargo:	481
IATA-max. quantity - Cargo:	5 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	No
Marine pollutant:	-

14.6. Special precautions for user

Warning: Flammable liquids! Vapours can form explosive mixtures with air.
In contact with water releases flammable gases. (Hydrogen, Ammonia (NH3))

14.7. Maritime transport in bulk according to IMO instruments

not applicable

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 40, Entry 75

Directive 2010/75/EU on industrial emissions:	< 75 %
Information according to Directive 2012/18/EU (SEVESO III):	O3 Substances or mixtures with hazard statement EUH029
Additional information:	P5c

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):	2 - obviously 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

Abbreviations and acronyms

Water-react. 3: Substances and mixtures which in contact with water emit flammable gases, hazard category 3
Flam. Liq. 2: Flammable liquids, hazard category 2
Flam. Liq. 3: Flammable liquids, hazard category 3
Acute Tox. 3: Acute toxicity, hazard category 3
Acute Tox. 4: Acute toxicity, hazard category 4
Asp. Tox. 1: Aspiration hazard, hazard category 1
Skin Corr. 1B: Skin corrosion, sub-category 1B
Eye Dam. 1: Serious eye damage, hazard category 1
Skin Sens. 1: Skin sensitisation, hazard category 1
STOT SE 3: Specific target organ toxicity - single exposure, hazard category 3
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

CAS: Chemical Abstracts Service
CLP: Classification, Labelling and Packaging
EU: European Union
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

REACh: Registration, Evaluation and Authorization of Chemicals
UN: United Nations
PBT: Persistent, Bioaccumulative, Toxic
SVHC: Substance of Very High Concern
vPvB: very Persistent, very Bioaccumulative
ATE: Acute Toxicity Estimates
BCF: Bio-Concentration Factor
DMEL: Derived Minimal Effect Level
DNEL: Derived No Effect Level
PNEC: Predicted No Effect Concentration
VOC: Volatile Organic Compounds
DIN: Deutsches Institut für Normung e.V. (German Institute for Standardization)
EN: European Standard
ISO: International Organization for Standardization
IUCLID: International Uniform ChemicaL Information Database
LC50: Lethal Concentration, 50 %
LD50: Lethal Dose, 50 %
LL50: Lethal Loading, 50 %
OECD: Organisation for Economic Co-operation and Development
EC50: Effective Concentration 50 %
M-Faktor: Multiplication Factor
EL50: Effect Loading, 50 %
ErC50: Effective Concentration 50 %, growth rate
M-Faktor: Multiplication Factor
NOEC: No Observed Effect Concentration
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 sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
DGR: Dangerous Goods Regulations
EmS: Emergency Schedules
IATA: International Air Transport Association
IBC: Intermediate Bulk Container
ICAO: International Civil Aviation Organization
IE: Industrial Emissions
IMDG: International Maritime Code for Dangerous Goods
LQ: Limited Quantity
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
MFAG: Medical First Aid Guide
RID: Regulations concerning the International carriage of Dangerous goods by rail
TI: Technical Instructions

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
Flam. Liq. 2; H225	On basis of test data
Water-react. 3; H261	On basis of test data
Acute Tox. 4; H302	Calculation method
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method
Skin Sens. 1; H317	Calculation method
Asp. Tox. 1; H304	Calculation method
Aquatic Chronic 4; H413	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H261	In contact with water releases flammable gases.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
EUH014	Reacts violently with water.
EUH029	Contact with water liberates toxic gas.
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.)