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

1.1. Product identifier

5180 Surface Disinfectant Cleaner 1l ALL

UFI: 4JA2-V00H-000M-SK9A

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

Use of the substance/mixture

Disinfectants

1.3. Details of the supplier of the safety data sheet

Company name: TUNAP GmbH & Co. KG
Street: Buergermeister-Seidl-Strasse 2
Place: D-82515 Wolfratshausen
Telephone: +49 (0) 8171/1600-0 Telefax: +49 (0) 8171/1600-40
E-mail: sdb@tunap.com
Internet: www.tunap.com

1.4. Emergency telephone number:

111 NHS (National Health Service)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Flam. Liq. 3; H226
Eye Dam. 1; H318
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

n-propanol

Signal word: Danger

Pictograms:

Hazard statements

H226	Flammable liquid and vapour.
H318	Causes serious eye damage.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P102	Keep out of reach of children.
P101	If medical advice is needed, have product container or label at hand.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe vapours.
P280	Wear eye 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.

P501 Dispose of contents/container according to the official regulations.

Special labelling of certain mixtures

Read attached instructions before use.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
64-17-5	ethanol			20 - < 25 %
	200-578-6	603-002-00-5	01-2119457610-43	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			
71-23-8	n-propanol			10 - < 20 %
	200-746-9	603-003-00-0	01-2119486761-29	
	Flam. Liq. 2, Eye Dam. 1, STOT SE 3; H225 H318 H336			
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides			0.1 - < 1 %
	939-253-5		01-2119965180-41	
	Flam. Liq. 3, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1; H226 H302 H314 H318 H400 H410			
85409-23-0	Quaternary ammonium compounds, Alkyl (C12 -C14) ethyl benzyl ammonium chloride			0.1 - < 1 %
	287-090-7			
	Acute Tox. 4, Skin Corr. 1B, Aquatic Acute 1, Aquatic Chronic 1; H302 H314 H400 H410			
7173-51-5	didecyldimethylammonium chloride			0.1 - < 1 %
	230-525-2	612-131-00-6	01-2119945987-15	
	Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 2; H302 H314 H318 H400 H411			

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		
64-17-5	200-578-6	ethanol	20 - < 25 %
	inhalation: LC50 = 95,6 mg/l (vapours); oral: LD50 = 6200 mg/kg Eye Irrit. 2; H319: >= 50 - 100		
71-23-8	200-746-9	n-propanol	10 - < 20 %
	inhalation: LC50 = > 33,8 mg/l (vapours); dermal: LD50 = 4032 mg/kg; oral: LD50 = 8000 mg/kg		
68424-85-1	939-253-5	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	0.1 - < 1 %
	dermal: LD50 = 3412,5 mg/kg; oral: LD50 = 795 mg/kg Aquatic Chronic 1; H410: M=1		
85409-23-0	287-090-7	Quaternary ammonium compounds, Alkyl (C12 -C14) ethyl benzyl ammonium chloride	0.1 - < 1 %
	oral: LD50 = 778 mg/kg Aquatic Acute 1; H400: M=10		
7173-51-5	230-525-2	didecyldimethylammonium chloride	0.1 - < 1 %
	dermal: LD50 = > 1000 mg/kg; oral: LD50 = ca. 329 mg/kg Aquatic Acute 1; H400: M=10		

Labelling for contents according to Regulation (EC) No 648/2004

disinfectants, preservation agents (Benzalkonium chloride).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.

After inhalation

Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

Wash with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

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

Headache, nausea, dizziness, fatigue, skin irritation

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

Treat symptomatically. Call a POISON CENTER. Symptoms can occur only after several hours.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water fog. Foam. Carbon dioxide (CO2). Extinguishing powder.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO2, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard area if it can be done safely. In case of fire: Wear self-contained breathing apparatus.

Additional information

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

Wear breathing apparatus if exposed to vapours/dusts/aerosols. Remove all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Wear personal protection equipment.

For non-emergency personnel

First aider: Pay attention to self-protection!

For emergency responders

Fight fire with normal precautions from a reasonable distance.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

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).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). 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

Observe instructions for use.
Dust must be exhausted directly at the point of origin. Vapours/aerosols must be exhausted directly at the point of origin. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.
When using do not eat, drink, smoke, sniff.
Wear personal protection equipment (refer to section 8).

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

Advice on general occupational hygiene

Avoid exposure. Wear suitable protective clothing. Draw up and observe skin protection programme.

Further information on handling

Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Observe legal regulations and provisions.

Hints on joint storage

Do not store together with: Oxidizing agents. Pyrophoric or self-heating substances. Food and feedingstuffs.

Further information on storage conditions

Store in a cool dry place. Observe legal regulations and provisions.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL
71-23-8	Propan-1-ol	200	500		TWA (8 h)	WEL
		250	625		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides			
Worker DNEL, long-term		inhalation	systemic	3,96 mg/m³
Worker DNEL, long-term		dermal	systemic	5,7 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	1,64 mg/m³
Consumer DNEL, long-term		dermal	systemic	3,4 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	3,4 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment		Value
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	
Freshwater		0,001 mg/l
Freshwater (intermittent releases)		0 mg/l
Marine water		0,001 mg/l
Freshwater sediment		12,27 mg/kg
Marine sediment		13,09 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,4 mg/l
Soil		7 mg/kg
7173-51-5	didecyldimethylammonium chloride	
Freshwater		0,0011 mg/l
Freshwater (intermittent releases)		0,00021 mg/l
Marine water		0,00011 mg/l
Freshwater sediment		61,86 mg/kg
Marine sediment		6,186 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,14 mg/l
Soil		1,4 mg/kg

Additional advice on limit values

a no restriction
b End of exposure or end of shift
c at long-term exposure:
d before next shift

blood (B)
Urine (U)

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: Tightly sealed safety glasses.
EN 166

Hand protection

Protect skin by using skin protective cream. 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.
Suitable material: NBR (Nitrile rubber) Breakthrough time: 480min
Thickness of the glove material 0,45 mm
EN ISO 374

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing and wash it before reuse.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.
When exceeding the relevant workplace exposure limits, note the following:
Suitable respiratory protective equipment: Combination filter device (DIN EN 141)..
Filtering device with filter or ventilator filtering device of type: A
Observe the wear time limits as specified by the manufacturer.
Observe legal regulations and provisions.

Environmental exposure controls

Observe legal regulations and provisions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colorless, clear
Odour:	alcoholic

		Test method
Melting point/freezing point:	No information available.	
Boiling point or initial boiling point and boiling range:	78 °C	
Lower explosion limits:	2,1 vol. %	
Upper explosion limits:	15 vol. %	
Flash point:	33 °C	ISO 3679
Auto-ignition temperature:	400 °C	
pH-Value (at 20 °C):	8	DIN 19268
Viscosity / kinematic: (at 40 °C)	>= 20 mm²/s	
Water solubility:	completely miscible	
Partition coefficient n-octanol/water:	No information available.	
Vapour pressure:	No information available.	
Vapour pressure:	No information available.	
Density (at 20 °C):	0,952 g/cm³	DIN 51757
Relative vapour density:	No information available.	

9.2. Other information

Information with regard to physical hazard classes

Sustained combustibility:	No data available

Other safety characteristics

Evaporation rate:	No information available.
Solvent separation test:	No information available.
Solvent content:	No information available.
Solid content:	No information available.
Sublimation point:	No information available.
Softening point:	No information available.
	No information available.

Viscosity / dynamic:	No information available.	DIN 53019-1
Flow time: (at 20 °C)	No information available.	

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharges.

10.5. Incompatible materials

Oxidizing agents. Pyrophoric or self-heating substances.

10.6. Hazardous decomposition products

Incomplete combustion and thermolysis gases of different toxicity can occur . In the case of hydrocarbonaceous products such as CO, CO2, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

Further information

Do not mix with other chemicals.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Toxicocinetics, metabolism and distribution

No information available.

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
64-17-5	ethanol					
	oral	LD50 mg/kg	6200	Rat	IUCLID	
	inhalation (4 h) vapour	LC50	95,6 mg/l	Rat	RTECS	
71-23-8	n-propanol					
	oral	LD50 mg/kg	8000	Rat		
	dermal	LD50 mg/kg	4032	Rabbit		
	inhalation (4 h) vapour	LC50 mg/l	> 33,8	Rat		
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides					
	oral	LD50 mg/kg	795	Rat	Study report (1986)	OECD Guideline 401
	dermal	LD50 mg/kg	3412,5	Rabbit	Study report (1977)	EPA OPPTS 870.1200
85409-23-0	Quaternary ammonium compounds, Alkyl (C12 -C14) ethyl benzyl ammonium chloride					
	oral	LD50 mg/kg	778	Rat		
7173-51-5	didecyldimethylammonium chloride					
	oral	LD50 mg/kg	ca. 329	Rat	Study report (1990)	OECD Guideline 401
	dermal	LD50 mg/kg	> 1000	Rat	Study report (1996)	OECD Guideline 402

Irritation and corrosivity

Serious eye damage/eye irritation: Causes serious eye damage.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.
No information available.

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.
No information available.

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.
No information available.

Aspiration hazard

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

Information on likely routes of exposure

Ingestion, Inhalation, Skin contact, Eye contact.
Reference to other sections: 2.1, 4.2.

Specific effects in experiment on an animal

No information available.

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

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.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
64-17-5	ethanol					
	Acute crustacea toxicity	EC50 9268 - 14221 mg/l	48 h	Daphnia magna	IUCLID	
71-23-8	n-propanol					
	Acute fish toxicity	LC50 4480 mg/l	96 h	Pimephales promelas		
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides					
	Acute fish toxicity	LC50 0,515 mg/l	96 h	Lepomis macrochirus	REACh Registration Dossier	EPA OPP 72-1
	Acute algae toxicity	ErC50 0,01 mg/l	96 h	Pseudokirchneriella subcapitata	REACh Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 0,016 mg/l	48 h	Daphnia magna	REACh Registration Dossier	EU Method C.2
	Fish toxicity	NOEC 0,2737 mg/l	7 d	Pimephales promelas	REACh Registration Dossier	other: U.S. EPA FIFRA 72-
	Crustacea toxicity	NOEC 0,013 mg/l	21 d	Daphnia magna	REACh Registration Dossier	OECD Guideline 211
	Acute bacteria toxicity	EC50 11 mg/l ( )	0,5 h	activated sludge of a predominantly domestic sewag	REACh Registration Dossier	OECD Guideline 209
7173-51-5	didecyldimethylammonium chloride					
	Acute fish toxicity	LC50 ca. 0,97 mg/l	96 h	Danio rerio	REACh Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50 ca. 0,062 mg/l	72 h	Raphidocelis subcapitata	REACh Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 ca. 0,057 mg/l	48 h	Daphnia magna	REACh Registration Dossier	OECD Guideline 202
	Crustacea toxicity	NOEC ca. 0,021 mg/l	21 d	Daphnia magna	REACh Registration Dossier	OECD Guideline 211

12.2. Persistence and degradability

There are no data available on the mixture itself. AOX (mg/l): 0

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
71-23-8	n-propanol			
	OECD Prüfrichtlinie 301F	83 - 92 %	28	

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64-17-5	ethanol	-0,31
71-23-8	n-propanol	0,29
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	1,01
7173-51-5	didecyldimethylammonium chloride	ca. 2,59

BCF

CAS No	Chemical name	BCF	Species	Source
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	66,74	Lepomis macrochirus	REACh Registration D

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.
This substance does not meet the criteria for classification as PBT or vPvB.

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.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

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

List of Wastes Code - residues/unused products

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

List of Wastes Code - used product

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Water (with cleaning agent). Completely emptied packages can be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN1987
14.2. UN proper shipping name:	ALCOHOLS, N.O.S.(ethanol, n-propanol)
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3
Classification code:	F1
Special Provisions:	274 601
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	30
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN1987
14.2. UN proper shipping name:	ALCOHOLS, N.O.S. (ethanol, n-propanol)
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3
Classification code:	F1
Special Provisions:	274 601
Limited quantity:	5 L
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number or ID number:	UN1987
14.2. UN proper shipping name:	ALCOHOLS, N.O.S.(ethanol, n-propanol)
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3
Marine pollutant:	No
Special Provisions:	223, 274
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN1987
14.2. UN proper shipping name:	ALCOHOLS, N.O.S.(ethanol, n-propanol)
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3
Special Provisions:	A3 A180
Limited quantity Passenger:	10 L
Passenger LQ:	Y344
Excepted quantity:	E1
IATA-packing instructions - Passenger:	355

IATA-max. quantity - Passenger:	60 L
IATA-packing instructions - Cargo:	366
IATA-max. quantity - Cargo:	220 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

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: No information available.

Directive 2004/42/EC on VOC in paints and varnishes: No information available.

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

National regulatory information

Water hazard class (D): 2 - obviously hazardous to water

Additional information

Information in accordance with Regulation (EU) Nr. 528/2012

Active agent	CAS-Nr.	g/100g
Ethanol	64-17-5	20,95
n-Propanol	71-23-8	10,00
Didecyldimethylammoniumchlorid	7173-51-5	0,24
C12-14-alkyl[(ethylphenyl)methyl]dimethylammoniumchlorid	85409-23-0	0,24
Benzyl-C12-16-alkyldimethylammoniumchlorid	68424-85-1	0,24

N-88172

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,4,5,6,7,8,9,10,11,12,13,15,16.

Abbreviations and acronyms

Flam. Liq: Flammable liquids
Acute Tox: Acute toxicity
Skin Corr: Skin corrosion
Eye Dam: Eye damage
Eye Irrit: Eye irritation
STOT SE: Specific target organ toxicity - single exposure
Aquatic Acute: Acute aquatic hazard
Aquatic Chronic: Chronic aquatic hazard
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)
IATA: International Air Transport Association
IMDG: International Maritime Code for Dangerous Goods
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 (division of the American Chemical Society)
DNEL/DMEL: Derived No Effect Level / Derived Minimal Effect Level
WEL: Workplace Exposure Limits
TWA (EC): Time-Weighted Average
ATE: Acute Toxicity Estimate
ATEL (EC): Short Term Exposure Limit
LC50: Lethal Concentration
EC50:half maximal Effective Concentration
ErC50: means EC50 in terms of reduction of growth rate

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Flam. Liq. 3; H226	On basis of test data
Eye Dam. 1; H318	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
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.

Further Information

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.

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