

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ICP-MS Verification Std 2, 125ml (140-110-021)

Revision: 05.02.2024

Product code: AC18.06188

Page 2 of 14

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Acute Tox. 3; H311
Acute Tox. 4; H332
Acute Tox. 4; H302
Skin Corr. 1B; H314
Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008****Hazard components for labelling**

hydrofluoric acid 1 %

Signal word: Danger**Pictograms:****Hazard statements**

H302+H332 Harmful if swallowed or if inhaled.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.

Additional advice on labelling

No information available.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Chemical characterization**

Mixtures in aqueous solution

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ICP-MS Verification Std 2, 125ml (140-110-021)

Revision: 05.02.2024

Product code: AC18.06188

Page 3 of 14

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7664-39-3	Hydrofluoric acid ... %			0.1 - < 5 %
	231-634-8	009-003-00-1	01-2119458860-33	
	Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, Skin Corr. 1A, Eye Dam. 1; H310 H330 H300 H314 H318			

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	
7664-39-3	231-634-8	Hydrofluoric acid ... %	0.1 - < 5 %
	inhalation: ATE = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists); inhalation: LC50 = 2240 ppm (gases); dermal: ATE = 5 mg/kg; oral: ATE = 5 mg/kg Skin Corr. 1A; H314: >= 7 - 100 Skin Corr. 1B; H314: >= 1 - < 7 Eye Irrit. 2; H319: >= 0,1 - < 1		

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.
Call a physician immediately.
fast help required

After inhalation

Provide fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Call a physician immediately.

After contact with skin

Rinse with plenty of water for at least 10 minutes. Immediately remove contaminated clothes. Apply calcium gluconate gel (preparation: boil 5 g of calcium gluconate in 85 ml of hot distilled water, add 10 g glycerol. Allow 5 g of Carmellose-sodium to swell in the hot solution. Stable for 6 months, store in a cool place) and massage into the skin until the pain subsides, in between rinse with water and apply fresh gel. Continue gel therapy for another 15 minutes after the pain has subsided. If no calcium gluconate gel is available, apply several dressings thoroughly moistened with 20 % calcium gluconate solution. Medical advice absolutely required!

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. Protect uninjured eye.

After ingestion

Never give anything by mouth to an unconscious person or a person with cramps.
Rinse mouth immediately and drink plenty of water.
Adverse human health effects and symptoms:
Gastric perforation
Remove casualty to fresh air and keep warm and at rest.
Call a physician immediately.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ICP-MS Verification Std 2, 125ml (140-110-021)

Revision: 05.02.2024

Product code: AC18.06188

Page 4 of 14

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

Irritant
Causes burns.
Cough
Dyspnoea
Risk of serious damage to eyes.
Gastric perforation
Circulatory collapse
Pulmonary oedema
Vomiting
seizures
Pneumonia

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

It is recommended to consult a doctor with experience in the treatment of lesions caused by hydrofluoric acid

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

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

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible liquids
Hazardous combustion products
In case of fire may be liberated: Hydrogen fluoride

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.
In case of fire and/or explosion do not breathe fumes. Use water spray jet to protect personnel and to cool endangered containers.

Additional information

Suppress gases/vapours/mists with water spray jet.
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Provide adequate ventilation.
Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Consult an expert
Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ICP-MS Verification Std 2, 125ml (140-110-021)

Revision: 05.02.2024

Product code: AC18.06188

Page 5 of 14

For containment

- Cover drains.
- Prevent spread over a wide area (e.g. by containment or oil barriers).
- Collect in closed and suitable containers for disposal.
- Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

- Clean contaminated articles and floor according to the environmental legislation.

Other information

- Provide adequate ventilation.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

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

- Avoid exposure - obtain special instructions before use.
- Read label before use. Handle and open container with care.
- When using do not eat, drink, smoke, sniff. Keep container tightly closed.
- Use personal protection equipment. Use extractor hood (laboratory).
- Provide adequate ventilation. Do not inhale fog/steam/aerosol.
- Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

- Usual measures for fire prevention.

Advice on general occupational hygiene

- Keep away from food, drink and animal feedingstuffs. Make available sufficient washing facilities
- Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Further information on handling

- Draw up and observe skin protection programme.
- Wash hands and face before breaks and after work and take a shower if necessary.
- Take off immediately all contaminated clothing and wash it before reuse.
- If handled uncovered, arrangements with local exhaust ventilation have to be used.

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

- Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations.
- storage temperature +5°C - +30°C

Hints on joint storage

- Take national regulations into account.

Further information on storage conditions

- Store in a dry place.
- Suitable container/equipment material: plastic
- Unsuitable container/equipment material: Metal Glass

7.3. Specific end use(s)

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ICP-MS Verification Std 2, 125ml (140-110-021)

Revision: 05.02.2024

Product code: AC18.06188

Page 6 of 14

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
7664-39-3	Hydrogen fluoride (as F)	1.8	1.5		TWA (8 h)	
		3	2.5		STEL (15 min)	

Biological limit values

CAS No	Substance	Parameter	Value	Test material	Sampling time
7664-39-3	Hydrogen fluoride	Fluoride	3 mg/L	Urine	End of shift

DNEL/DMEL values

CAS No	Substance	DNEL type	Exposure route	Effect	Value
7664-39-3	Hydrofluoric acid ... %				
		Worker DNEL, long-term	inhalation	systemic	1,5 mg/m ³
		Worker DNEL, acute	inhalation	systemic	2,5 mg/m ³
		Worker DNEL, long-term	inhalation	local	1,5 mg/m ³
		Worker DNEL, acute	inhalation	local	2,5 mg/m ³
		Consumer DNEL, long-term	inhalation	systemic	0,03 mg/m ³
		Consumer DNEL, acute	inhalation	systemic	0,03 mg/m ³
		Consumer DNEL, long-term	inhalation	local	0,2 mg/m ³
		Consumer DNEL, acute	inhalation	local	1,25 mg/m ³
		Consumer DNEL, long-term	oral	systemic	0,01 mg/kg bw/day
		Consumer DNEL, acute	oral	systemic	0,01 mg/kg bw/day

PNEC values

CAS No	Substance	Environmental compartment	Value
7664-39-3	Hydrofluoric acid ... %		
		Freshwater	0,89 mg/l
		Marine water	0,089 mg/l
		Freshwater sediment	3,38 mg/kg
		Marine sediment	0,338 mg/kg
		Micro-organisms in sewage treatment plants (STP)	51 mg/l
		Soil	10,6 mg/kg

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Technical measures and the application of suitable work processes have priority over personal protection

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ICP-MS Verification Std 2, 125ml (140-110-021)

Revision: 05.02.2024

Product code: AC18.06188

Page 7 of 14

equipment.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Suitable eye protection:

goggles

Face protection umbrella

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet (>, <)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing.

Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Liquid
Colour:	colourless
Odour:	odourless

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ICP-MS Verification Std 2, 125ml (140-110-021)

Revision: 05.02.2024

Product code: AC18.06188

Page 8 of 14

Odour threshold:	No data available	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and boiling range:		No data available
Flammability:		not applicable
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		X
Auto-ignition temperature:		No data available
Decomposition temperature:		not determined
pH-Value:		acidic
Viscosity / kinematic:		not determined
Water solubility:		Soluble in: Water
Solubility in other solvents not determined		
Dissolution rate:		No data available
Partition coefficient n-octanol/water:		not determined
Dispersion stability:		No data available
Vapour pressure:		not determined
Vapour pressure:		not determined
Density:		not determined
Relative density:		No data available
Bulk density:		No data available
Relative vapour density:		not determined
Particle characteristics:		No data available

9.2. Other information**Information with regard to physical hazard classes**

Explosive properties No data available	
Sustained combustibility: Self-ignition temperature	No data available
Solid: Gas:	not applicable not applicable
Oxidizing properties Not oxidising.	

Other safety characteristics

Evaporation rate:	not determined
Solvent separation test:	No data available
Solvent content:	No data available
Solid content:	not determined
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
No data available:	
Viscosity / dynamic:	not determined
Flow time:	not determined

Further Information

No data available

SECTION 10: Stability and reactivity

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ICP-MS Verification Std 2, 125ml (140-110-021)

Revision: 05.02.2024

Product code: AC18.06188

Page 9 of 14

10.1. Reactivity

No data available

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Alkali metals
Fluorine
permanganates, e.g. potassium permanganate
Alkali (lye)
Metal
Nitric acid
Acetic anhydride
Ammonia (NH₃)
sulphuric acid
Sodium and potassium hydroxide

(HF) Danger of inflammation or formation of inflammatory gases or vapours with: alkali metals, fluorine, organic substances, vinyl acetate. Explosive danger with: potassium permanganate, alkali hydroxides, strong bases, fluorides, potassium, metals, sodium, methanesulfonic acid, nitric acid, with glycerin. Exothermic reaction with: acetic anhydride, ammonia, ammonium hydroxide, sodium hydroxide, oleum, phosphorus oxides, silicon compounds, ethylamine, sulphuric acid, bismuth acid.

10.4. Conditions to avoid

Radiant heat.

10.5. Incompatible materials

Metal
Glass

The product develops hydrogen in an aqueous solution in contact with metals.

10.6. Hazardous decomposition products

In case of fire:

SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

Avoid exposure - obtain special instructions before use.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ICP-MS Verification Std 2, 125ml (140-110-021)

Revision: 05.02.2024

Product code: AC18.06188

Page 10 of 14

Acute toxicity

- Toxic in contact with skin.
- Harmful if inhaled.
- Harmful if swallowed.
- If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).
- Causes poorly healing wounds.
- Irritant
- Causes burns.
- Cough
- Dyspnoea
- Risk of serious damage to eyes.
- Gastric perforation
- Circulatory collapse
- Pulmonary oedema
- Vomiting
- seizures
- Pneumonia

ATEmix calculated

ATE (oral) 500,0 mg/kg; ATE (dermal) 500,0 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) 5,000 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7664-39-3	Hydrofluoric acid ... %				
	oral	ATE 5 mg/kg			
	dermal	ATE 5 mg/kg			
	inhalation vapour	ATE 0,5 mg/l			
	inhalation dust/mist	ATE 0,05 mg/l			
	inhalation (1 h) gas	LC50 2240 ppm	Rat	Study report (1990)	OECD Guideline 403

Irritation and corrosivity

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

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.
- No data available

Information on likely routes of exposure

No data available

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ICP-MS Verification Std 2, 125ml (140-110-021)

Revision: 05.02.2024

Product code: AC18.06188

Page 11 of 14

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information

No data available

Further information

Following ingestion gastric perforation
 Liver and kidney damage
 Risk of serious damage to eyes.
 Resorption (oral)
 Resorption (by inhalation)
 Resorption (dermal)
 The substance has delayed effects.
 Other dangerous properties cannot be excluded.

SECTION 12: Ecological information

12.1. Toxicity

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

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7664-39-3	Hydrofluoric acid ... %					
	Acute fish toxicity	LC50 299 mg/l	96 h	Salmo trutta	RECh Registration Dossier	other: U.S Environmental Protection Agen
	Acute algae toxicity	ErC50 43 mg/l	96 h	various algae species	RECh Registration Dossier	Methods not detailed in the review.
	Crustacea toxicity	NOEC 3,7 mg/l	21 d	Daphnia magna	RECh Registration Dossier	The publication is a review article of v
	Acute bacteria toxicity	EC50 2930 mg/l ()	3 h	Activated sludge	RECh Registration Dossier	ISO 8192

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

BCF

CAS No	Chemical name	BCF	Species	Source
7664-39-3	Hydrofluoric acid ... %	53 - 58	not specified	RECh Registration D

12.4. Mobility in soil

No information available.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ICP-MS Verification Std 2, 125ml (140-110-021)

Revision: 05.02.2024

Product code: AC18.06188

Page 12 of 14

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.
- Do not allow to enter into surface water or drains.
- Do not allow to enter into soil/subsoil.
- Harmful effect due to pH shift.
- Forms corrosive mixtures with water even if diluted.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

- Send to a physico-chemical treatment facility under observation of official regulations.
- Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
- Do not allow to enter into surface water or drains.

Contaminated packaging

- This material and its container must be disposed of as hazardous waste.
- Handle contaminated packages in the same way as the substance itself.
- Waste codes/waste designations according to EWC/AVV

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number:	UN 3264
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrofluoric acid)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Classification code:	C1
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 3264
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrofluoric acid)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Classification code:	C1
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ICP-MS Verification Std 2, 125ml (140-110-021)

Revision: 05.02.2024

Product code: AC18.06188

Page 13 of 14

Marine transport (IMDG)

14.1. UN number or ID number:	UN 3264
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrofluoric acid)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Special Provisions:	223 274
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-B
Segregation group:	1 - acids

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 3264
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrofluoric acid)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Special Provisions:	A3 A803
Limited quantity Passenger:	1 L
Passenger LQ:	Y841
Excepted quantity:	E1
IATA-packing instructions - Passenger:	852
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	856
IATA-max. quantity - Cargo:	60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: Toxic. strongly corrosive.

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 75**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

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

Skin resorption/Sensitization: Permeates easily through outer skin and causes poisoning.

15.2. Chemical safety assessment

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

SECTION 16: Other information

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ICP-MS Verification Std 2, 125ml (140-110-021)

Revision: 05.02.2024

Product code: AC18.06188

Page 14 of 14

Abbreviations and acronyms

Acute Tox. 1: Acute toxicity, hazard category 1
Acute Tox. 2: Acute toxicity, hazard category 2
Acute Tox. 3: Acute toxicity, hazard category 3
Acute Tox. 4: Acute toxicity, hazard category 4
Skin Corr. 1A: Skin corrosion, sub-category 1A
Skin Corr. 1B: Skin corrosion, sub-category 1B
Eye Dam. 1: Serious eye damage, hazard category 1
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%

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

Classification	Classification procedure
Acute Tox. 3; H311	Calculation method
Acute Tox. 4; H332	Calculation method
Acute Tox. 4; H302	Calculation method
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method

Relevant H and EUH statements (number and full text)

H300 Fatal if swallowed.
H302 Harmful if swallowed.
H302+H332 Harmful if swallowed or if inhaled.
H310 Fatal in contact with skin.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H332 Harmful if inhaled.

Further Information

Provide appropriate information, instructions and training to users

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 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.)