

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Date first issue: 01/08/2008 Review date: 07/08/2024 Supersedes version of: 17/02/2023 Version: 8.3

info@christeyns.be, www.christeyns.com

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

1.1. Product identifier

Product form : Mixture Product name : ZAKOL Product code : 501

Type of product : Detergent, Acids

: Mixture Product group

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

1.2.1. Relevant identified uses

: Professional use,Industrial use Main use category

Industrial/Professional use spec : Industrial

For professional use only

: Cleaner Use of the substance/mixture

Descaler

#### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Supplier Manufacturer Christeyns Professional Hygiene UK Ltd Christeyns NV Afrikalaan 182 Clover House

Macclesfield Road 9000 GENT SK23 7DQ Whaley Bridge, Derbyshire Belgium United Kingdom T +32 (0)9/ 223 38 71, F +32 (0)9/ 233 03 44

T 01663 733114, F 01663 733115

info.cph.uk@christeyns.com, www.christeyns-ph.co.uk

#### 1.4. Emergency telephone number

Country/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH	0344 892 0111	Only for healthcare professionals

#### **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

## Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 1 H314 Serious eye damage/eye irritation, Category 1 H318 Hazardous to the aquatic environment - Chronic Hazard, H412 Category 3

Full text of H- and EUH-statements: see section 16

#### Adverse physicochemical, human health and environmental effects

No additional information available

### 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS05

CLP Signal word : Danger

: Bis (2-hydroxyethyl) oleyl amine; Hydrochloric acid ...% Contains Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage.

H412 - Harmful to aquatic life with long lasting effects.

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Precautionary statements (CLP) : P102 - Keep out of reach of children.

P260 - Do not breathe fume.

P280 - Wear protective gloves, eye protection.

P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P315 - Get immediate medical advice/attention.

P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water or shower.

P332+P313 - If skin irritation occurs: Get medical advice/attention.

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing. P337+P313 - If eye irritation persists: Get medical advice/attention.

P362 - Take off contaminated clothing.

#### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Bis (2-hydroxyethyl) oleyl amine (25307-17-9), Cetyl trimethyl ammonium chloride (112-02-7)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Bis (2-hydroxyethyl) oleyl amine (25307-17-9), Cetyl trimethyl ammonium chloride (112-02-7)

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## **SECTION 3: Composition/information on ingredients**

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hydrochloric acid% substance with national workplace exposure limit(s) (BE); substance with a Community workplace exposure limit	CAS-no: 7647-01-0 Einecs nr: 231-595-7 EG annex nr: 017-002-01-X REACH-no: 01-2119484862- 27	5 – 10	Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Met. Corr. 1, H290
Bis (2-hydroxyethyl) oleyl amine	CAS-no: 25307-17-9 Einecs nr: 246-807-3 REACH-no: 01-2119510876- 35	1 – 3	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1)
Cetyl trimethyl ammonium chloride	CAS-no: 112-02-7 Einecs nr: 203-928-6 REACH-no: 01-2119970558- 23	0.1 – 1	Acute Tox. 4 (Oral), H302 (ATE=699 mg/kg bodyweight) Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410

Specific concentration limits:	ecific concentration limits:		
Name	Product identifier	Specific concentration limits (%)	
Hydrochloric acid%	CAS-no: 7647-01-0 Einecs nr: 231-595-7 EG annex nr: 017-002-01-X REACH-no: 01-2119484862- 27	$(10 \le C < 100)$ STOT SE 3, H335 $(10 \le C < 25)$ Eye Irrit. 2, H319 $(10 \le C < 25)$ Skin Irrit. 2, H315 $(25 \le C < 100)$ Skin Corr. 1B, H314	

Full text of H- and EUH-statements: see section 16

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#### **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

General advice : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical

advice (show the label where possible).

Inhalation : Allow affected person to breathe fresh air. Allow the victim to rest.

Skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water,

followed by warm water rinse.

Eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness

persists.

Ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Acute effects inhalation : Inhalation may cause irritation, cough, shortness of breath.

Acute effects skin : Causes severe burns. Red skin.
Acute effects eyes : Causes serious eye damage.

Acute effects oral route : Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

No additional information available

### **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

Suitable extinguishing media : Water.

#### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released. Hydrogen chloride. Phosgene.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any

chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Use a self-contained breathing apparatus and also a protective suit.

### **SECTION 6: Accidental release measures**

### 6.1. Personal precautions, protective equipment and emergency procedures

## 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

Collect spillage. Store away from other materials.

#### 6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

### **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.

iornation of vapour.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a cool, well-ventilated place. Keep container tightly closed.

Incompatible products : Strong bases.
Packaging materials : polyethylene.

#### 7.3. Specific end use(s)

No additional information available

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### **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

Hydrochloric acid% (7647-01-0)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Hydrogen chloride
IOEL TWA	8 mg/m³
	5 ppm
IOEL STEL	15 mg/m³
	10 ppm

### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

No additional information available

#### 8.1.5. Control banding

No additional information available

#### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

### Appropriate engineering controls:

Ensure that there is a suitable ventilation system.

## 8.2.2. Personal protection equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

### Personal protective equipment symbol(s):







### 8.2.2.1. Eye and face protection

#### Eye protection:

Chemical goggles or safety glasses. Wear eye protection

### 8.2.2.2. Skin protection

#### Protective equipment:

Acid-resistant clothing

#### Hand protection:

Wear protective gloves

### Other skin protection

### Materials for protective clothing:

Wear protective clothing

#### 8.2.2.3. Respiratory protection

#### Respiratory protection:

In case of inadequate ventilation wear respiratory protection.

### 8.2.2.4. Thermal hazards

No additional information available

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#### 8.2.3. Environmental exposure controls

#### Other information:

Do not eat, drink or smoke during use.

#### **SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Colour : Blue.
Physical state/form : Liquid.
Odour : Pine. Floral.
Odour threshold : Not available
Melting point/range : 0 °C

Freezing point : Not determined as it is not relevant for the characterization of the product

Boiling point/Boiling range : 100 °C

Flammability : Not determined as it is not relevant for the characterization of the product

Non flammable.

Lower explosion limit : Constituents do not contain chemical groups associated with explosivity

Upper explosion limit : Constituents do not contain chemical groups associated with explosivity

Flash point : Not determined as it is not relevant for the characterization of the product

Autoignition temperature : Determination of the auto-ignition temperature is only relevant for pyrophoric liquids,

however the mixture is not a pyrophoric liquid so the test is not required.

Decomposition temperature : Only applies to self-reactive substances and mixtures, organic peroxides, and other

substances and mixtures that may decompose.

pH : 0 – 1

Viscosity, kinematic : Not available Viscosity, dynamic : 300 cP at 20 °C Solubility : Soluble in water. Partition coefficient n-octanol/water (Log Kow) Not available Vapour pressure : Not available Vapour pressure at 50°C : Not available : Not available Density Relative density : 1.04 g/cm<sup>3</sup> Relative vapour density at 20°C : Not available Particle characteristics : Not applicable

#### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## **SECTION 10: Stability and reactivity**

## 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Stable under normal conditions.

## 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Strong bases.

## 10.6. Hazardous decomposition products

fume. Hydrogen chloride. Phosgene.

## **SECTION 11: Toxicological information**

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified

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Acute toxicity (inhalation) : Not classified

Bis (2-hydroxyethyl) oleyl amine (25307-17-9)	
LD50 oral rat	300 – 2000 ml/kg

## Cetyl trimethyl ammonium chloride (112-02-7)

LD50 oral rat	699 mg/kg
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Skin corrosion/irritation : Causes severe skin burns.

pH: 0 - 1

Serious eye damage/irritation : Causes serious eye damage.

pH: 0 – 1

Respiratory or skin sensitisation : Not classified

Additional information : Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified

Additional information : Based on available data, the classification criteria are not met

STOT-single exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

## Hydrochloric acid ...% (7647-01-0)

STOT-single exposure	May cause respiratory irritation.
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STOT-repeated exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

Aspiration hazard : Not classified

Additional information : Based on available data, the classification criteria are not met

# Bis (2-hydroxyethyl) oleyl amine (25307-17-9)

Viscosity, kinematic 165 mm<sup>2</sup>/s

## 11.2. Information on other hazards

## 11.2.1. Endocrine disrupting properties

No additional information available

#### 11.2.2. Other information

Potential adverse human health effects and symptoms

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

### **SECTION 12: Ecological information**

#### 12.1. Toxicity Ecology - water

NOEC chronic algae

: Harmful to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term

(acute)

: Not classified

0.04 mg/l

Hazardous to the aquatic environment, long-term

(chronic)

: Harmful to aquatic life with long lasting effects.

Bis (2-hydroxyethyl) oleyl amine (25307-17-9)	
LC50 - Fish [1]	0.1 – 1 mg/l
EC50 - Crustacea [1]	0.01 – 0.1 mg/l
EC50 72h - Algae [1]	0.01 – 0.1 mg/l
Cetyl trimethyl ammonium chloride (112-02-7)	
LOSO 5'-1 [4]	
LC50 - Fish [1]	0.19 – 0.29 mg/l
EC50 - Crustacea [1]	0.19 – 0.29 mg/l 0.28 mg/l

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#### 12.2. Persistence and degradability

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ZAKOL		
Persistence and degradability	Biodegradable. The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.	
Bis (2-hydroxyethyl) oleyl amine (25307-17-9)		
Persistence and degradability	May cause long-term adverse effects in the environment.	
Cetyl trimethyl ammonium chloride (112-02-7)		
Persistence and degradability	May cause long-term adverse effects in the environment.	
Hydrochloric acid% (7647-01-0)		
Persistence and degradability	Rapidly degradable	
40.0 Physical Left and Cold L		

12.3. Bioaccumulative potential

12.3. Bloaccumulative potential		
ZAKOL		
Bioaccumulative potential	No bioaccumulation.	
Bis (2-hydroxyethyl) oleyl amine (25307-17-9)		
Log Pow	3.4	
Bioaccumulative potential	Bioaccumulation unlikely. Not established.	
Cetyl trimethyl ammonium chloride (112-02-7)		
Bioconcentration factor (BCF REACH)	79	
Log Pow	3.08	
Bioaccumulative potential	Not established.	

## 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

#### **ZAKOL**

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### Component

Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Bis (2-hydroxyethyl) oleyl amine (25307-17-9), Cetyl trimethyl ammonium chloride (112-02-7)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Bis (2-hydroxyethyl) oleyl amine (25307-17-9), Cetyl trimethyl ammonium chloride (112-02-7)

## 12.6. Endocrine disrupting properties

No additional information available

#### 12.7. Other adverse effects

Additional information : Avoid release to the environment.

### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Product/Packaging disposal recommendations

Waste / unused products

**HP Code** 

: Dispose in a safe manner in accordance with local/national regulations.

: Avoid release to the environment.

: HP8 - "Corrosive:" waste which on application can cause skin corrosion.

HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for

one or more sectors of the environment

## **SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA

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ADR	IMDG	IATA	
14.1. UN number or ID number			
UN 3264	UN 3264	UN 3264	
14.2. UN proper shipping name			
CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid)	Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric acid)	
Transport document description			
UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid), 8, II, (E)	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid), 8, II	UN 3264 Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric acid), 8, II	
14.3. Transport hazard class(es)			
8	8	8	
8	8	8	
14.4. Packing group	'		
II	II	II	
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	
No supplementary information available			

## 14.6. Special precautions for user

**Overland transport** 

Classification code (ADR) : C1
Special provisions (ADR) : 274
Limited quantities (ADR) : 11

Packing instructions (ADR) : P001, IBC02
Mixed packing provisions (ADR) : MP15
Portable tank and bulk container instructions : T11

(ADR)

Portable tank and bulk container special provisions

(ADR)

Tank code (ADR): L4BNVehicle for tank carriage: ATTransport category (ADR): 2Hazard identification number (Kemler No.): 80

Orange plates

80 3264

: TP2, TP27

Tunnel code : E
EAC code : 2X
APP code : B

Transport by sea

Special provisions (IMDG) : 274
Limited quantities (IMDG) : 1 L
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02

Air transport

PCA Limited quantities (IATA) : Y840 PCA limited quantity max net quantity (IATA) : 0.5L

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PCA packing instructions (IATA) : 851
PCA max net quantity (IATA) : 1L
CAO packing instructions (IATA) : 855
CAO max net quantity (IATA) : 30L
Special provisions (IATA) : A3, A803

### 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

#### 15.1.1. EU-Regulations

#### **REACH Annex XVII (Restriction List)**

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

#### **REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

#### **REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

#### **PIC Regulation (Prior Informed Consent)**

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

#### **POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

#### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

#### Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

### **Detergent Regulation (648/2004)**

### Allergenic fragrances > 0.01 %:

D-Limonene

Labelling of contents			
Component	%		
cationic surfactants	<5%		
perfumes			
D-LIMONENE			

#### **Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

#### **Drug Precursors Regulation (273/2004)**

Contains substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

Name	CN designation	CAS-No.	CN code	Category, Subcategory	Threshold	Annex
Hydrochloric acid	Hydrogen chloride	7647-01-0	2806 10 00	Category 3		Annex I

#### 15.1.2. National regulations

No additional information available

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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### **SECTION 16: Other information**

Data sources

: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:				
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4			
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1			
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1			
Eye Dam. 1	Serious eye damage/eye irritation, Category 1			
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2			
H290	May be corrosive to metals.			
H302	Harmful if swallowed.			
H314	Causes severe skin burns and eye damage.			
H315	Causes skin irritation.			
H318	Causes serious eye damage.			
H319	Causes serious eye irritation.			
H335	May cause respiratory irritation.			
H400	Very toxic to aquatic life.			
H410	Very toxic to aquatic life with long lasting effects.			
H412	Harmful to aquatic life with long lasting effects.			
Met. Corr. 1	Corrosive to metals, Category 1			
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B			
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C			
Skin Irrit. 2	Skin corrosion/irritation, Category 2			
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation			

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:			
Skin Corr. 1	H314	On basis of test data	
Eye Dam. 1	H318	On basis of test data	
Aquatic Chronic 3	H412	Calculation method	

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.