

## Safety Data Sheet

### MAPECOAT ACT 196 BASE T

Safety Data Sheet dated: 04/02/2020 - version 2



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

### 1.1. Product identifier

Mixture identification:

Trade name: MAPECOAT ACT 196 BASE T

Trade code: 906LY0920

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

Recommended use: Varnish

Uses advised against: Data not available

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

Company: MAPEI U.K. Ltd - Mapei House Steel Park Road

Halesowen - West Midlands B62 8HD

www.mapei.co.uk (office hour 8:30-17:30)

Responsible: sicurezza@mapei.it

### 1.4. Emergency telephone number

call NHS 111 or a doctor/OHES Environmental Ltd +44(0)1684 299 886

phone: +44(0)121 508 6970 - fax: +44(0)121 5086 960

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Regulation (EC) n. 1272/2008 (CLP)

Aquatic Chronic 3 Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

### 2.2. Label elements

#### Hazard statements:

H412 Harmful to aquatic life with long lasting effects.

#### Precautionary statements:

P273 Avoid release to the environment.

P501 Dispose of contents/container in accordance with applicable regulations.

#### Special Provisions:

EUH208 Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

EUH208 Contains reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H - isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

EUH208 Contains pyrithione zinc. May produce an allergic reaction.

#### Special provisions according to Annex XVII of REACH and subsequent amendments:

None

### 2.3. Other hazards

No PBT/vPvB Ingredients are present

Other Hazards: No other hazards

This product contains crystalline silica (quartz sand). IARC has classified crystalline silica as a Group 1 carcinogen. Both IARC and NTP consider silica as a known human carcinogen. Evidence is based on the chronic and long-term exposure workers have had to respirable sized crystalline silica dust particles. Because this product is in liquid or paste form, it does not pose a dust hazard; therefore, this classification is not relevant. (Note: sanding of the hardened product may create a silica dust hazard)

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

N.A.

### 3.2. Mixtures

Mixture identification: MAPECOAT ACT 196 BASE T

#### Hazardous components within the meaning of the CLP regulation and related classification:

Quantity	Name	Ident. Numb.	Classification	Registration Number
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≥0.49 - <1 %	2-(2-butoxyethoxy)ethanol	CAS:112-34-5 EC:203-961-6	Eye Irrit. 2, H319	01-2119475104-44-XXXX
≥0.49 - <1 %	free crystalline silica (Ø >10 µ)	CAS:14808-60-7 EC:238-878-4		
≥0.25 - <0.49 %	polyethylene glycol monooleylether	CAS:9004-98-2 EC:500-016-2	Skin Irrit. 2, H315; Aquatic Acute 1, H400	
≥0.1 - <0.25 %	zinc pyrithione	CAS:13463-41-7 EC:236-671-3	Acute Tox. 3, H301; Acute Tox. 3, H331; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410, M-Chronic:10, M-Acute:100	
≥0.05 - <0.1 %	free crystalline silica (Ø <10 µ)	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372	
≥0.025 - <0.05 %	ammonia, anhydrous	CAS:7664-41-7 EC:231-635-3 Index:007-001-00-5	Flam. Gas 2, H221; Press. Gas, H280; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Acute Tox. 3, H331	
≥0.01 - <0.016 %	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS:2634-33-5 EC:220-120-9 Index:613-088-00-6	Skin Irrit. 2, H315; Eye Dam. 1, H318; Aquatic Acute 1, H400; Acute Tox. 4, H302; Skin Sens. 1, H317; Aquatic Chronic 2, H411	
≥0.0015 - <0.005 %	2-methyl-2H-isothiazol-3-one	CAS:2682-20-4 EC:220-239-6	Acute Tox. 3, H311; Acute Tox. 3, H301; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 2, H330; Skin Corr. 1B, H314; Skin Sens. 1A, H317, M-Acute:10	
<0.0015 %	reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	CAS:55965-84-9 EC:611-341-5 Index:613-167-00-5	Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 3, H301; Skin Corr. 1C, H314; Skin Sens. 1A, H317; Acute Tox. 2, H310; Acute Tox. 2, H330; Eye Dam. 1, H318, M-Chronic:100, M-Acute:100	

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

Wash immediately with water.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and the hazard label.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

N.A.

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

Treatment: N.A.

(see paragraph 4.1)

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

Extinguishing media which must not be used for safety reasons:

None in particular.

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

Do not inhale explosion and combustion gases.

### 5.3. Advice for firefighters

Use suitable breathing apparatus.

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## SECTION 6: Accidental release measures

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

Wear personal protection equipment.  
Remove persons to safety.

### 6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.  
Limit leakages with earth or sand.

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

Suitable material for taking up: absorbing material, organic, sand  
Retain contaminated washing water and dispose it.

### 6.4. Reference to other sections

See also section 8 and 13

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.  
Don't use empty container before they have been cleaned.  
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.  
Contaminated clothing should be changed before entering eating areas.  
Do not eat or drink while working.  
See also section 8 for recommended protective equipment.

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

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

### 7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### List of components with OEL value

Component	OEL Type	Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Behaviour	Note
2-(2-butoxyethoxy)ethanol	DFG	GERMANY	C			100,5	15		
	ACGIH				10				
	National	SWEDEN		68	10				
	EU			67,5	10	101,2	15	Indicative	
	National	FRANCE		68	10	101,2	15		
	National	SPAIN		67,5	10	101,2	15		
	National	GREECE		67,5	10	101,2	15		
	National	DENMARK		68	10				
	National	FINLAND		68	10				
	National	GERMANY		67	10				
	National	PORTUGAL		67,5	10	101,2	15		
	National	NORWAY		68	10	102	15		
	National	BELGIUM		67,5	10	101,2	15		
	NDS	POLAND		67					
	NDSCh	POLAND				100			
CHE	SWITZERLAND			101	15				
NDS	NETHERLANDS		50	100					

	National	CZECH REPUBLIC		100				
	National	HUNGARY		67,5		101,2		
	National	ESTONIA		67,5	10			
	National	LATVIA		67,5	10	101,2	15	
	National	CZECH REPUBLIC	C			100		
	National	SLOVAKIA	C			101,2		
	National	SLOVAKIA		67,5	10			
	National	SLOVENIA		67,5	10	101,25	15	
	National	UNITED KINGDOM		67,5	10	101,2	15	
	National	BULGARIA		67,5	10	101,2	15	
	National	ROMANIA		67,5	10	101,2	15	
	TUR	TURKEY		67,5	10	101,2	15	
	National	LITHUANIA		67,5	10	101,2	15	
	National	CROATIA		67,5	10	101,2	15	
free crystalline silica (Ø >10 µ)	NDS	POLAND		0,300				frakcja respirabilna
	National	DENMARK		0,3				DENMARK, inhalable aerosol inhalable aerosol
	National	DENMARK		0,100				DENMARK, respirable aerosol respirable aerosol
	SUVA	GERMANY		0,150				50 µg/m <sup>3</sup> (Partikel Durchmesser < 12 µm ) - TRGS 906
	National	SWITZERLAND		0,15				A
	ACGIH	NNN		0,025				(R), A2 - Pulm fibrosis, lung cancer
	National	NORWAY		0,300				K 7
free crystalline silica (Ø <10 µ)	National	SWEDEN		0,100				SWEDEN, respirable aerosol
	National	NORWAY		0,100				K 7
	NDS	POLAND		2,000				frakcja wdychalna
	NDS	POLAND		0,300				frakcja respirabilna
	National	DENMARK		0,3		0,600		DENMARK, inhalable aerosol inhalable aerosol
	National	DENMARK		0,100		0,200		DENMARK, respirable aerosol respirable aerosol
	ACGIH	NNN		0,025				(R), A2 - Pulm fibrosis, lung cancer
	EU	NNN		0,025				A2 (R) - Pulm fibrosis, lung cancer
	National	AUSTRIA		0,150				A*
ammonia, anhydrous	National	SWEDEN	C	14	20	36	50	SWEDEN, Ceiling limit value, refers to a 5 minutes period.
	National	NORWAY		11	15			NORWAY, 2
	National	NORWAY				36	50	NORWAY, S
	EU	NNN		14	20	36	50	
	National	NORWAY		14	20	28	40	
	ACGIH	NNN			25		35	Eye dam, URT irr
	DFG	GERMANY	C			28	40	
	ACGIH				25		35	eye damage;upper respiratory tract irritation

National	SWEDEN		14	20		
National	FRANCE		7	10	14	20
National	SPAIN		14	20	36	50
National	GREECE		35	50	35	50
National	DENMARK		14	20		
National	FINLAND		14	20	36	50
National	GERMANY		14	20		
National	PORTUGAL		14	20	36	50
National	NORWAY		11	15	36	50
National	NORWAY		11	20	36	50
National	BELGIUM		14	20	36	50
NDS	POLAND		14			
NDSCh	POLAND				28	
CHE	SWITZERLAND				28	40
NDS	NETHERLANDS		14		36	
National	CZECH REPUBLIC		14			
National	HUNGARY		14		36	
Malaysia OEL	MALAYSIA		17	25		
National	ESTONIA		14	20	36	50
National	LATVIA		14	20	36	50
National	CZECH REPUBLIC	C			36	
National	SLOVAKIA	C			36	
National	SLOVAKIA		14	20		
National	SLOVENIA		14	20	35	50
National	UNITED KINGDOM		18	25	25	35
National	BULGARIA		14,0	20	36,0	50
National	ROMANIA		14	20	36	50
TUR	TURKEY		14	20	36	50
National	LITHUANIA		14	20	36	50
National	CROATIA		14	20	36	50
EU			14	20	36	50
2-methyl-2H-isothiazol-3-one	DFG	GERMANY	C		0,4	
	CHE	SWITZERLAND			0,4	

Indicative

## 8.2. Exposure controls

### Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

### Protection for skin:

No special precaution must be adopted for normal use.

### Protection for hands:

Suitable materials for safety gloves; EN 374:

Polychloroprene - CR: thickness  $\geq 0,5\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .

Nitrile rubber - NBR: thickness  $\geq 0,35\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .

Butyl rubber - IIR: thickness  $\geq 0,5\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .

Fluorinated rubber - FKM: thickness  $\geq 0,4\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .

Neoprene gloves are suggested (0,5 mm) not recommended gloves: not waterproof gloves

### Respiratory protection:

Personal Protective Equipment should comply with relevant CE standards (as EN 374 for gloves and EN 166 for goggles), correctly maintained and stored. Consult the supplier to check the suitability of equipment against specific chemicals and for user information.

### Hygienic and Technical measures

N.A.

### Appropriate engineering controls:

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

Physical state: Liquid

Appearance and colour: paste various

Odour: characteristic

Odour threshold: N.A.

pH: 8.50

Melting point / freezing point: N.A.

Initial boiling point and boiling range: N.A.

Flash point: N.A.

Evaporation rate: N.A.

Upper/lower flammability or explosive limits: N.A.

Vapour density: N.A.

Vapour pressure: N.A.

Relative density: N.A.

Solubility in water: N.A.

Partition coefficient (n-octanol/water): N.A. - This product is a mixture

Auto-ignition temperature: N.A. - No explosive or spontaneous ignition in contact with air at room temperature

Decomposition temperature: N.A.

Viscosity: N.A.

Explosive properties: N.A. - No components with explosive properties

Oxidizing properties: N.A. - No component with oxidizing properties

Solid/gas flammability: N.A.

**9.2. Other information**

No additional information

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Stable under normal conditions

**10.2. Chemical stability**

Stable under normal conditions

**10.3. Possibility of hazardous reactions**

None.

**10.4. Conditions to avoid**

Stable under normal conditions.

**10.5. Incompatible materials**

None in particular.

**10.6. Hazardous decomposition products**

None.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Toxicological information of the mixture:**

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

**Toxicological information on main components of the mixture:**

2-(2-butoxyethoxy)ethanol      a) acute toxicity      LD50 Skin Rabbit = 2700 mg/kg

LD50 Oral Rat = 5660 mg/kg

free crystalline silica (Ø >10 µ)      a) acute toxicity      LD50 Oral > 2000 mg/kg

LD50 Skin > 2000 mg/kg

polyethylene glycol monooleylether      a) acute toxicity      LD50 Oral Rat 2700 mg/kg

		LD50 Oral Rat = 2700 mg/kg
zinc pyrithione	a) acute toxicity	LD50 Skin Rabbit = 100 mg/kg LD50 Oral Rat = 177 mg/kg LC50 Inhalation Rat 0,05 mg/l 4h
free crystalline silica (Ø <10 µ)	a) acute toxicity	LD50 Oral Rat = 500 mg/kg
ammonia, anhydrous	a) acute toxicity	LD50 Oral Rat = 350 mg/kg LC50 Inhalation Rat = 2000 ppm 4h
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	a) acute toxicity	LD50 Oral Rat = 1020 mg/kg
2-methyl-2H-isothiazol-3-one	a) acute toxicity	LD50 Oral Rat > 183 mg/kg  LD50 Skin Rat = 242 mg/kg LD50 Skin Rabbit = 200 mg/kg LD50 Oral Rat 232 mg/kg LD50 Oral Rat = 120 mg/kg LC50 Inhalation Rat = 0,11 mg/l 4h
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	a) acute toxicity	LD50 Oral Rat = 457 mg/kg  LC50 Inhalation Rat = 2,36 mg/l 4h LD50 Skin Rabbit = 660 mg/kg LD50 Oral Rat = 53 mg/kg

**If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.**

- a) acute toxicity
- b) skin corrosion/irritation
- c) serious eye damage/irritation
- d) respiratory or skin sensitisation
- e) germ cell mutagenicity
- f) carcinogenicity
- g) reproductive toxicity
- h) STOT-single exposure
- k) Toxicological kinetics, metabolism and distribution information
- i) STOT-repeated exposure
- j) aspiration hazard

## **SECTION 12: Ecological information**

### **12.1. Toxicity**

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## List of components with eco-toxicological properties

Component	Ident. Numb.	Ecotox Infos
2-(2-butoxyethoxy)ethanol	CAS: 112-34-5 - EINECS: 203-961-6	a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 1300 mg/L 96h EPA a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna > 100 mg/L 48h IUCLID a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus > 100 mg/L 96h IUCLID
ammonia, anhydrous	CAS: 7664-41-7 - EINECS: 231-635-3 - INDEX: 007-001-00-5	a) Aquatic acute toxicity : LC50 Fish Cyprinus carpio = 0,44 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus 0,26 mg/L 96h IUCLID a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 1,17 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Pimephales promelas 0,73 mg/L 96h IUCLID a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 5,9 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Poecilia reticulata > 1,5 mg/L 96h IUCLID a) Aquatic acute toxicity : LC50 Fish Poecilia reticulata = 1,19 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 25,4 mg/L 48h IUCLID
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS: 2634-33-5 - EINECS: 220-120-9 - INDEX: 613-088-00-6	a) Aquatic acute toxicity : LC50 Fish = 2,15000 mg/L b) Aquatic chronic toxicity : NOEC Algae = 0,04030 mg/L 72h b) Aquatic chronic toxicity : EC50 Algae = 0,11000 mg/L 72h
2-methyl-2H-isothiazol-3-one	CAS: 2682-20-4 - EINECS: 220-239-6	a) Aquatic acute toxicity : LC50 Fish = mg/L 96 a) Aquatic acute toxicity : LC50 Daphnia = mg/L 48 a) Aquatic acute toxicity : EC50 Algae = mg/L 72 b) Aquatic chronic toxicity : NOEC Daphnia = mg/L
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	CAS: 55965-84-9 - EINECS: 611-341-5 - INDEX: 613-167-00-5	a) Aquatic acute toxicity : EC50 Daphnia = 0,12 mg/L 48 a) Aquatic acute toxicity : LC50 Fish = 0,22 mg/L 96 a) Aquatic acute toxicity : EC50 Algae = 0,048 mg/L 72 b) Aquatic chronic toxicity : NOEC Algae = 0,0012 mg/L 72 b) Aquatic chronic toxicity : NOEC Fish = 0,098 mg/L - 28 d b) Aquatic chronic toxicity : NOEC Daphnia = 0,004 mg/L - 21 d

### 12.2. Persistence and degradability

N.A.

### 12.3. Bioaccumulative potential

N.A.

### 12.4. Mobility in soil

N.A.

### 12.5. Results of PBT and vPvB assessment

No PBT/vPvB Ingredients are present

### 12.6. Other adverse effects

N.A.



## **SECTION 13: Disposal considerations**

### **13.1. Waste treatment methods**

Recover if possible. In so doing, comply with the local and national regulations currently in force.

A waste code according to European waste catalogue (EWC) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

Product:

Do not dispose of waste into sewers.

Do not contaminate ponds, waterways or ditches with chemical or used container.

Send to an authorized waste disposal service.

Contaminated packaging:

Empty remaining content.

Dispose of as unused product.

Do not re-use empty containers.

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## **SECTION 14: Transport information**

Not classified as dangerous in the meaning of transport regulations.

### **14.1. UN number**

N.A.

### **14.2. UN proper shipping name**

N.A.

### **14.3. Transport hazard class(es)**

N.A.

### **14.4. Packing group**

N.A.

### **14.5. Environmental hazards**

N.A.

### **14.6. Special precautions for user**

N.A.

Road and Rail (ADR-RID):

N.A.

Air (IATA):

N.A.

Sea (IMDG):

N.A.

### **14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

N.A.

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## **SECTION 15: Regulatory information**

### **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

VOC (2004/42/EC) : 50 g/l

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EU) 2015/830

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Provisions related to directive EU 2012/18 (Seveso III):

N.A.

### **German Water Hazard Class**

N.A.

**Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:**

Restrictions related to the product: 3, 40

Restrictions related to the substances contained: 28, 55

**SVHC Substances:**

No Data Available

MAL-kode: 00-3 (1993)

**15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out for the mixture.

**SECTION 16: Other information**

Code	Description
H221	Flammable gas.
H280	Contains gas under pressure; may explode if heated.
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure .
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.

Code	Hazard class and hazard category	Description
2.2/2	Flam. Gas 2	Flammable gas, Category 2
2.5	Press. Gas	Gases under pressure
3.1/3/Inhal	Acute Tox. 3	Acute toxicity (inhalation), Category 3
3.1/3/Oral	Acute Tox. 3	Acute toxicity (oral), Category 3
3.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.9/1	STOT RE 1	Specific target organ toxicity — repeated exposure, Category 1
4.1/A1	Aquatic Acute 1	Acute aquatic hazard, category 1
4.1/C1	Aquatic Chronic 1	Chronic (long term) aquatic hazard, category 1
4.1/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:****Classification according to Regulation (EC) Nr. 1272/2008**

4.1/C3 Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor  
BEI: Biological Exposure Index  
BOD: Biochemical Oxygen Demand  
CAS: Chemical Abstracts Service (division of the American Chemical Society).  
CAV: Poison Center  
CE: European Community  
CLP: Classification, Labeling, Packaging.  
CMR: Carcinogenic, Mutagenic and Reprotoxic  
COD: Chemical Oxygen Demand  
COV: Volatile Organic Compound  
CSA: Chemical Safety Assessment  
CSR: Chemical Safety Report  
DMEL: Derived Minimal Effect Level  
DNEL: Derived No Effect Level.  
DPD: Dangerous Preparations Directive  
DSD: Dangerous Substances Directive  
EC50: Half Maximal Effective Concentration  
ECHA: European Chemicals Agency  
EINECS: European Inventory of Existing Commercial Chemical Substances.  
ES: Exposure Scenario  
GefStoffVO: Ordinance on Hazardous Substances, Germany.  
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.  
IARC: International Agency for Research on Cancer  
IATA: International Air Transport Association.  
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).  
IC50: half maximal inhibitory concentration  
ICAO: International Civil Aviation Organization.  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).  
IMDG: International Maritime Code for Dangerous Goods.  
INCI: International Nomenclature of Cosmetic Ingredients.  
IRCCS: Scientific Institute for Research, Hospitalization and Health Care  
KSt: Explosion coefficient.  
LC50: Lethal concentration, for 50 percent of test population.  
LD50: Lethal dose, for 50 percent of test population.  
LDLo: Leathal Dose Low  
N.A.: Not Applicable  
N/A: Not Applicable  
N/D: Not defined/ Not available  
NA: Not available  
NIOSH: National Institute for Occupational Safety and Health  
NOAEL: No Observed Adverse Effect Level  
OSHA: Occupational Safety and Health Administration.  
PBT: Persistent, Bioaccumulative and Toxic  
PGK: Packaging Instruction  
PNEC: Predicted No Effect Concentration.  
PSG: Passengers  
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.  
STEL: Short Term Exposure limit.  
STOT: Specific Target Organ Toxicity.  
TLV: Threshold Limiting Value.  
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).  
vPvB: Very Persistent, Very Bioaccumulative.  
WGK: German Water Hazard Class.

**Paragraphs modified from the previous revision:**

- 2. HAZARDS IDENTIFICATION
- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 5. FIRE-FIGHTING MEASURES
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 13. DISPOSAL CONSIDERATIONS

- 15. REGULATORY INFORMATION