

**Safety Data Sheet**  
**MAPETHERM FLEX RP**

Safety Data Sheet dated: 06/02/2020 - version 2



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

**1.1. Product identifier**

Mixture identification:

Trade name: MAPETHERM FLEX RP

Trade code: 907MT0900

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

Recommended use: Wall coating paste

Uses advised against: Data not available

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

Company: MAPEI S.p.A. - Via Cafiero, 22 - 20158 Milano

Tel: +39-02-376731

Fax: +39-02-37673.214

Responsible: sicurezza@mapei.it

**1.4. Emergency telephone number**

Poison Centre - Ospedale di Niguarda - Milan - Tel. +39/02/66101029

MAPEI S.p.A. - Tel. +(39)02376731 - (office hours)

**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 to ... .

**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 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.

**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: MAPETHERM FLEX RP

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

Quantity	Name	Ident. Numb.	Classification	Registration Number
≥10 - <20 %	free crystalline silica (Ø >10 µ)	CAS:14808-60-7 EC:238-878-4		
≥0.1 - <0.25 %	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	
≥0.025 - <0.05 %	free crystalline silica (Ø <10 µ)	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372	
≥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 %	n-butyl acrylate	CAS:141-32-2 EC:205-480-7 Index:607-062-00-3	Flam. Liq. 3, H226; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Skin Sens. 1B, H317; Aquatic Chronic 3, H412	01-2119453155-43-XXXX
<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	
<0.0015 %	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	

## 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 (CO2).

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.

## 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/m <sup>3</sup>	Long Term ppm	Short Term mg/m <sup>3</sup>	Short Term ppm	Behaviour	Note
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

free crystalline silica (Ø <10 µ)	National	NORWAY	0,300				K 7
	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*
n-butyl acrylate	National	SWEDEN	50	10	80	15	SWEDEN, Short-term value, 15 minutes average value
	National	NORWAY	11	2			NORWAY, A
	EU	NNN	11	2	53	10	
	National	NORWAY	11	2	22	4	
	ACGIH	NNN		2			DSEN, A4 - Irr
	DFG	GERMANY			22	4	
	ACGIH			2			A4 - Not Classifiable as a Human Carcinogen; irritation; dermal sensitizer
	National	SWEDEN	11	2			
	National	FRANCE	11	2	53	10	
	National	SPAIN	11	2	53	10	
	National	GREECE	55	10			
	National	DENMARK	11	2			
	National	FINLAND	11	2	53	10	
	National	GERMANY	11	2			
	National	PORTUGAL	11	2	53	10	
	National	NORWAY	11	2	16,5	4	
	National	BELGIUM	11	2	53	10	
	NDS	POLAND	11				
	NDSch	POLAND			30		
	CHE	SWITZERLAND			22	4	
	NDS	NETHERLAND	11		53		

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National CZECHIA	10				
National HUNGARY	11			53	
Malaysi a OEL	10,48	2			
National ESTONIA	11	2		53	10
National LATVIA	11	2		53	10
National CZECHIA C				20	
National SLOVAKIA C				53	
National SLOVAKIA	11	2			
National SLOVENIA	11	2		55	10
National UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	5	1		26	5
National BULGARIA	11	2		53	10
National ROMANIA	11	2		53	10
TUR TURKEY	11	2		53	10
National LITHUANIA	11	2		53	10
National CROATIA	11	2		53	10
EU	11	2		53	10
2-methyl-2H-isothiazol-3-one	DFG	GERMANY C		0,4	
	CHE	SWITZERLAND		0,4	

Indicative

**Predicted No Effect Concentration (PNEC) values**

Component	CAS-No.	PNEC LIMIT	Exposure Route	Exposure Frequency	Remark
n-butyl acrylate	141-32-2	0,00272	Fresh Water mg/l		
		0,00027	Marine water mg/l		
		0,0338	Freshwater mg/kg sediments		
		1	Soil mg/kg		
		0,00338	Marine water mg/kg sediments		
		0,011	Intermittent mg/l release		
		3,5	Microorganisms mg/l in sewage treatments		

**Derived No Effect Level. (DNEL)**

Component	CAS-No.	Worker Industrial	Worker Professional	Consumer	Exposure Route	Exposure Frequency	Remark
n-butyl acrylate	141-32-2	11 mg/m3			Human Inhalation	Long Term, local effects	

**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:

N.A.

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Appearance and colour: dense liquid various

Odour: characteristic

Odour threshold: N.A.

pH: N.A.

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: Soluble

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: 27,000.00 cPs

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

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

Solid/gas flammability: ==

### 9.2. Other information

No additional information

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## 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.

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## 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:

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 pyrrhione	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
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	a) acute toxicity	LD50 Oral Rat = 1020 mg/kg
n-butyl acrylate	a) acute toxicity	LC50 Inhalation Rat = 10,3 mg/l 4h LD50 Skin Rabbit = 3500 mg/kg LD50 Oral Rat = 3500 mg/kg LD50 Skin Rabbit = 3024 mg/kg LC50 Inhalation Rat = 10,3 mg/l 4h LD50 Oral Rat = 9050 mg/kg
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
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

**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
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
n-butyl acrylate	CAS: 141-32-2 - EINECS: 205-480-7 - INDEX: 607-062-00-3	a) Aquatic acute toxicity : LC50 Fish = 5 mg/L 96  a) Aquatic acute toxicity : EC50 Daphnia = 5 mg/L 48 a) Aquatic acute toxicity : EC50 Algae = 5 mg/L 96 b) Aquatic chronic toxicity : NOEC Daphnia = 0,136 mg/L - 21 d c) Bacteria toxicity : EC50 Bacteria > 1000 mg/L a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss = 5,2 mg/L 96h IUCLID a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 8,2 mg/L 48h IUCLID a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 5,5 mg/L 96h IUCLID
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
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

### 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



## 12.6. Other adverse effects

N.A.

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## 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) : N.A. 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

### SVHC Substances:

No Data Available

MAL-kode: 1-3 (1993)

### 15.2. Chemical safety assessment

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

## SECTION 16: Other information

Code	Description
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
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
2.6/3	Flam. Liq. 3	Flammable liquid, Category 3
3.1/3/Inhal	Acute Tox. 3	Acute toxicity (inhalation), Category 3
3.1/3/Oral	Acute Tox. 3	Acute toxicity (oral), Category 3
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
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
3.4.2/1B	Skin Sens. 1B	Skin Sensitisation, Category 1B
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
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	Classification procedure
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4.1/C3	Calculation method
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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
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 13. DISPOSAL CONSIDERATIONS
- 14. TRANSPORT INFORMATION
- 15. REGULATORY INFORMATION
- 16. OTHER INFORMATION