

## Safety Data Sheet

### MAPEFER 1K

Safety Data Sheet dated: 14/06/2022 - version 3



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

### 1.1. Product identifier

Mixture identification:

Trade name: MAPEFER 1K

Trade code: 902766

UFI: 5D40-R0QS-9000-DGRH

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

Recommended use: Ready prepared cement mortar

Uses advised against: 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

phone: +44(0)121 508 6970 - fax: +44(0)121 5086 960 - [www.mapei.co.uk](http://www.mapei.co.uk) (office hour 8:30-17:30)

Responsible: [sicurezza@mapei.it](mailto:sicurezza@mapei.it)

### 1.4. Emergency telephone number

call NHS 111 or a doctor/OHES Environmental Ltd +44(0)333 333 9962

## SECTION 2: Hazards identification



### 2.1. Classification of the substance or mixture

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

Skin Irrit. 2	Causes skin irritation.
Eye Dam. 1	Causes serious eye damage.
Skin Sens. 1B	May cause an allergic skin reaction.
STOT SE 3	May cause respiratory irritation.

Adverse physicochemical, human health and environmental effects:

No other hazards

### 2.2. Label elements

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

#### Pictograms and Signal Words



Danger

#### Hazard statements:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

#### Precautionary statements:

P261	Avoid breathing dust.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/clothing and eye/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.

#### Contains:

portland cement, Cr(VI) < 2 ppm

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

None.

### 2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration  $\geq 0.1\%$ .

Other Hazards: No other hazards

Prolonged exposition and/or intensive inhalation of respirable free crystalline silica (average diameter less than 10 micron in accordance with ACGIH) can cause pulmonary fibrosis commonly referred to as silicosis.

This preparation contains cement. Contact between cement and body fluids (e.g. sweat and eye fluids) may cause irritation or burns.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not Relevant

### 3.2. Mixtures

Mixture identification: MAPEFER 1K

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

Concentration (%) w/w	Name	Ident. Numb.	Classification	Registration Number
$\geq 50 - < 75\%$	portland cement, Cr(VI) < 2 ppm	CAS:65997-15-1 EC:266-043-4	Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Dam. 1, H318; STOT SE 3, H335	
$\geq 0.49 - < 1\%$	sodium nitrite	CAS:7632-00-0 EC:231-555-9 Index:007-010-00-4	Ox. Sol. 2, H272; Acute Tox. 3, H301; Eye Irrit. 2, H319; Aquatic Acute 1, H400	01-2119471836-27-0000
$< 0,00015\%$	formaldehyde	CAS:50-00-0 EC:200-001-8 Index:605-001-00-5	Acute Tox. 3, H311 Acute Tox. 3, H331 Acute Tox. 3, H301 Skin Corr. 1B, H314 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350	01-2119488953-20-XXXX
Specific Concentration Limits: $0,2\% \leq C < 100\%$ : Skin Sens. 1 H317 $5\% \leq C < 25\%$ : Skin Irrit. 2 H315 $5\% \leq C < 25\%$ : Eye Irrit. 2 H319 $5\% \leq C < 100\%$ : STOT SE 3 H335 $25\% \leq C < 100\%$ : Skin Corr. 1B H314				

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose of safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

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

In case of Inhalation:

In case of inhalation, consult a doctor immediately and show him packing or label.

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

Eye irritation

Eye damages

Skin Irritation

Erythema

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

(see paragraph 4.1)

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## **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.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

### **6.2. Environmental precautions**

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

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

Take up mechanically and dispose of according to local/state/federal regulations

Scoop into containers and seal for disposal.

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.

Use localized ventilation system.

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**

	OEL Type	Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Behaviour	Note
portland cement, Cr(VI) < 2 ppm CAS: 65997-15-1	National	FINLAND		1					FINLAND, respirabel fraktion
	NDS	POLAND		6					frakcja wdychalna
	NDS	POLAND		2					frakcja respirabilna
	SUVA	SWITZERLAND		5					A4 - Not Classifiable as a Human Carcinogen;pulmonary function;respiratory symptoms;asthma
	DFG	GERMANY		15					
	National	SPAIN		4,000					5 mg/m3 TWA (containing <1% of free Silica, respirable dust);10 mg/m3 TWA (containing <1% of free Silica, total dust)
	National	PORTUGAL		10					
	National	BELGIUM		10					
	National	HUNGARY		10					
	Malaysi a OEL	MALAYSIA		10,000					
	National	UNITED KINGDOM		10,000					inhalable dust
	National	UNITED KINGDOM		4,000					respirable dust
	National	CROATIA		10,000		10,000			
	DFG	GERMANY	C	15					
	ACGIH	AUSTRALIA		1,000					A4 - Not Classifiable as a Human Carcinogen;pulmonary function;respiratory symptoms;asthma
	Malaysi a OEL	MALAYSIA		10					5 mg/m3 TWA (containing <1% of free Silica, respirable dust);10 mg/m3 TWA (containing <1% of free Silica, total dust)
	National	UNITED KINGDOM		10		30,000			5 mg/m3 TWA (containing <1% of free Silica, respirable dust);10 mg/m3 TWA (containing <1% of free Silica, total dust)
	National	UNITED KINGDOM		4,000					
	National	ROMANIA		10					
	ACGIH			1					A4 - Not Classifiable as a Human Carcinogen;pulmonary function;respiratory symptoms;asthma
	National	SPAIN		4					
	National	FINLAND		5					
	NDS	POLAND		6					
	National	LATVIA		6					
sodium nitrite CAS: 7632-00-0	National	LITHUANIA	C			0,1			
formaldehyde CAS: 50-00-0	ACGIH		C				0,3		DSEN, RSEN, A2 - URT and eye irr

DFG	GERMANY	C			0,74	0,6
ACGIH			0,1			0,3
National	SWEDEN		0,37	0,3		
National	FRANCE			0,5		1
National	SPAIN		0,37	0,3	0,74	0,6
National	GREECE		2,5	2	2,5	2
National	DENMARK	C			0,4	0,3
National	FINLAND		0,37	0,3		
National	FINLAND	C			1,2	1
National	GERMANY		0,37	0,3		
National	NORWAY		0,6	0,5		
National	NORWAY	C			1,2	1
NDS	POLAND		0,37			
NDSch	POLAND				0,74	
CHE	SWITZERLAND				0,74	0,6
NDS	NETHERLANDS		0,15		0,5	
National	CZECH REPUBLIC		0,5			
National	HUNGARY		0,6		0,6	
Malaysi a OEL	MALAYSIA	C			0,37	0,3
National	PORTUGAL	C				0,3
National	ESTONIA		0,6	0,5	1,2	1
National	LATVIA		0,5			
National	CZECH REPUBLIC	C			1	
National	SLOVAKIA	C			0,74	
National	SLOVAKIA		0,37	0,3		
National	SLOVENIA		0,62	0,5	0,62	0,5
National	UNITED KINGDOM		2,5	2	2,5	2
National	BULGARIA		1,0		2,0	
National	ROMANIA		1,2	1	3	2
National	LITHUANIA		0,6	0,5		
National	LITHUANIA	C			1,2	1
National	CROATIA		2,5	2	2,5	2
EU			0,37	0,3		

A1 - Confirmed Human  
Carcinogen;eye and upper  
respiratory tract  
irritation;upper respiratory  
tract cancer;dermal  
sensitizer; respiratory  
sensitizer

Binding

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

	PNEC Limit	Exposure Route	Exposure Frequency	Remark
sodium nitrite CAS: 7632-00-0	0,0054 mg/l	Fresh Water		
	0,00616 mg/l	Marine water		
	0,0195 mg/kg	Freshwater sediments		
	0,0223 mg/kg	Marine water sediments		
formaldehyde CAS: 50-00-0	0,47 mg/l	Fresh Water		

0,47 mg/l Marine water  
 4,7 mg/l Intermittent release  
 0,19 mg/l Microorganisms in  
 sewage treatments  
 2,44 mg/kg Freshwater  
 sediments  
 2,44 mg/kg Marine water  
 sediments  
 0,21 mg/kg Soil

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

	Worker Industrial	Worker Professional	Consumer	Exposure Route	Exposure Frequency	Remark
sodium nitrite CAS: 7632-00-0	2 mg/m3			Human Inhalation	Short Term, systemic effects	
	2 mg/m3			Human Inhalation	Long Term, systemic effects	
formaldehyde CAS: 50-00-0	1 mg/m3			Human Inhalation	Short Term, local effects	
	240 mg/kg	102 mg/kg		Human Dermal	Long Term, systemic effects	
	9 mg/m3	3,2 mg/m3		Human Inhalation	Long Term, systemic effects	
	0,037 mg/cm2	0,012 mg/cm2		Human Dermal	Long Term, local effects	
	0,5 mg/m3	0,1 mg/m3		Human Inhalation	Long Term, local effects	
		4,1 mg/kg		Human Oral	Long Term, systemic effects	

## 8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Suitable materials for safety gloves; EN ISO 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  $\geq 480\text{min}$ .

Nitrile gloves are suggested (1,3 mm; 480 min). Not recommended gloves: not waterproof gloves

Respiratory protection:

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

Respiratory protection must be used where exposure levels exceed workplace exposure limits. Refer to appropriate EN standards, like EN 136, 140, 143, 149, 14387 for information on selection and use of appropriate respiratory protection equipment.

A dust mask (P2) should be worn if above exposure limits (EN 149)

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

Hygienic and Technical measures

Not available

Appropriate engineering controls:

Not available

## SECTION 9: Physical and chemical properties

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

Physical state: Solid

Appearance: powder

Color: Blue  
Odour: cement like  
Odour threshold: Not available  
Melting point / freezing point: Not available  
Initial boiling point and boiling range: Not available  
Flammability: N.A.  
Upper/lower flammability or explosive limits: Not available  
Flash point: Not available  
Auto-ignition temperature: Not available  
Decomposition temperature: Not available  
pH: Not available  
pH (water dispersion, 10%): 12.50  
Viscosity: Not available  
Kinematic viscosity: Not available  
Solubility in water: partly soluble  
Solubility in oil: insoluble  
Partition coefficient (n-octanol/water): Not available  
Vapour pressure: Not available  
Relative density: Not available  
Vapour density: Not available

**Particle characteristics:**

Particle size: Not available

**9.2. Other information**

Miscibility: Not available  
Conductivity: Not available  
Explosive properties: ==  
No other relevant 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 hazard classes as defined in Regulation (EC) No 1272/2008**

Contains cement. Cement gives a strong alkaline reaction with water and body fluids (e.g. sweat and eye fluids), therefore the contact with skin and eyes should be carefully avoided.

**Toxicological information of the mixture:**

a) acute toxicity	Not classified
	Based on available data, the classification criteria are not met
b) skin corrosion/irritation	The product is classified: Skin Irrit. 2(H315)
c) serious eye damage/irritation	The product is classified: Eye Dam. 1(H318)
d) respiratory or skin sensitisation	The product is classified: Skin Sens. 1B(H317)
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified
	Based on available data, the classification criteria are not met
h) STOT-single exposure	The product is classified: STOT SE 3(H335)

i) STOT-repeated exposure	Not classified
	Based on available data, the classification criteria are not met
j) aspiration hazard	Not classified
	Based on available data, the classification criteria are not met

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

sodium nitrite	a) acute toxicity	LD50 Oral Rat = 180 mg/kg
formaldehyde	a) acute toxicity	LD50 Oral Rat = 700 mg/kg LC50 Inhalation Rat = 0,578 mg/l LD50 Skin Rabbit = 270 mg/kg LD50 Skin Rabbit = 270 mg/kg LC50 Inhalation Rat = 0,578 mg/l 4h LD50 Oral Rat = 100 mg/kg

### 11.2 Information on other hazards

#### Endocrine disrupting properties:

No endocrine disruptor substances present in concentration  $\geq 0.1\%$

## SECTION 12: Ecological information

### 12.1. Toxicity

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

Eco-Toxicological Information:

#### List of Eco-Toxicological properties of the product

Not classified for environmental hazards

Based on available data, the classification criteria are not met

#### List of components with eco-toxicological properties

Component	Ident. Numb.	Ecotox Infos
sodium nitrite	CAS: 7632-00-0 - EINECS: 231-555-9 - INDEX: 007-010-00-4	a) Aquatic acute toxicity : LC50 Fish > 0,54 mg/L 96h
formaldehyde	CAS: 50-00-0 - EINECS: 200-001-8 - INDEX: 605-001-00-5	a) Aquatic acute toxicity : LC50 Fish = 41 mg/L 96  a) Aquatic acute toxicity : EC50 Daphnia = 42 mg/L 24 a) Aquatic acute toxicity : LC50 Fish Pimephales promelas 22,6 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 1510 µg/L 96h EPA  a) Aquatic acute toxicity : LC50 Fish Brachydanio rerio = 41 mg/L 96h IUCLID a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss 0,032 mL/L 96h EPA  a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss 100 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Pimephales promelas 23,2 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 2 mg/L 48h IUCLID  a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna 11,3 mg/L 48h EPA

### 12.2. Persistence and degradability

N.A.

### 12.3. Bioaccumulative potential

Component	Bioaccumulation
sodium nitrite	Not bioaccumulative

### 12.4. Mobility in soil

N.A.



## 12.5. Results of PBT and vPvB assessment

No PBT, vPvB or endocrine disruptor substances present in concentration  $\geq 0.1\%$ .

## 12.6 Endocrine disrupting properties

No endocrine disruptor substances present in concentration  $\geq 0.1\%$

## 12.7 Other adverse effects

Not available

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Recover if possible.

A waste code (EWC) according to European List of Waste (LoW) cannot be specified, due to dependence on the usage. Contact and send to an authorized waste disposal service.

Methods of disposal:

Disposal of this product, solutions, packaging and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor.

Do not dispose of waste into sewers.

Hazardous waste: Yes

Disposal considerations:

Do not allow to enter drains or watercourses.

Dispose of product according to all federal, state and local applicable regulations.

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.

Dispose of containers contaminated by the product in accordance with local or national legal provisions. For further information, contact your local waste authority.

Special precautions:

This material and its container must be disposed of in a safe way. Care should be taken when handling untreated empty containers.

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Empty containers or liners may retain some product residues. 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 or ID number

Not Applicable

### 14.2. UN proper shipping name

Not Applicable

### 14.3. Transport hazard class(es)

Not Applicable

### 14.4. Packing group

Not Applicable

### 14.5. Environmental hazards

Not Applicable

### 14.6. Special precautions for user

Not Applicable

Road and Rail (ADR-RID) :

ADR-Hazard identification number: NA

Not Applicable

Air (IATA) :

Not Applicable

Sea (IMDG) :

Not Applicable

### 14.7. Maritime transport in bulk according to IMO instruments

Not Applicable

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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

The product contains Cr (VI) under the limits established by annex. XVII pt.47. Respect the duration according to the information described on the packaging.

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) n. 2020/878  
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)  
Regulation (EU) n. 2018/669 (ATP 11 CLP)  
Regulation (EU) n. 2019/521 (ATP 12 CLP)  
Regulation (EU) n. 2018/1480 (ATP 13 CLP)  
Regulation (EU) n. 2020/217 (ATP 14 CLP)  
Regulation (EU) n. 2020/1182 (ATP 15 CLP)

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

None

**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: None.

Restrictions related to the substances contained: 28, 40, 72, 75

**SVHC Substances:**

SVHC substances not present in a concentration  $\geq 0.1\%$  (w/w)

**National regulations**

Produktregisteret Norge: 110186

Produktregister Danmark: 4368014

MAL-kode: 00-4 (1993)

**German Water Hazard Class (WGK)**

Class 2: hazardous for water.

**15.2. Chemical safety assessment**

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

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**SECTION 16: Other information**

Code	Description
H272	May intensify fire; oxidiser.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
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.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H400	Very toxic to aquatic life.

Code	Hazard class and hazard category	Description
2.14/2	Ox. Sol. 2	Oxidising solid, Category 2
3.1/3/Dermal	Acute Tox. 3	Acute toxicity (dermal), 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

3.2/1B	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
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.4.2/1B	Skin Sens. 1B	Skin Sensitisation, Category 1B
3.5/2	Muta. 2	Germ cell mutagenicity, Category 2
3.6/1B	Carc. 1B	Carcinogenicity, Category 1B
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
4.1/A1	Aquatic Acute 1	Acute aquatic hazard, category 1

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

<b>Classification according to Regulation (EC) Nr. 1272/2008</b>	<b>Classification procedure</b>
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3.2/2	Calculation method
3.3/1	Calculation method
3.4.2/1B	Calculation method
3.8/3	Calculation method

If appropriate, specific provisions in relation to possible training for workers are mentioned in section 2. Any training related to safety in the workplace must in any case refer to a risk assessment that must be carried out by a company safety officer taking into account the specific operating and environmental conditions in which the products are used.

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  
KAFH: KAFH  
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.

**\* Sheet model entirely changed in compliance to regulatory update.**