

**Safety Data Sheet****MIKROS 001**

Safety Data Sheet dated 02/12/2024 version 4

This Safety Data Sheet is prepared voluntarily: it is not required according to Article 31 of Regulation (EC) No 1907/2006.

As amended by UK REACH Regulation SI 2019/758.

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Mixture identification:

Trade name: MIKROS 001

Trade code: COL662

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

Recommended use: Water-based primer in microemulsion for walls

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

Company: FASSA Srl

Via Lazzaris, 3 - 31027 Spresiano (TV) - Italy

Tel. +39 0422 7222

Fax +39 0422 887509

Imported in the UK:

FASSA UK LTD

Ashchurch Business Centre,

Alexandra Way, Ashchurch, Tewkesbury GL20 8TD- UK

Tel. +44 (0) 1684.212272

Responsible: laboratorio.spresiano@fassabortolo.it

**1.4. Emergency telephone number**

NHS 111

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**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) n. 1272/2008 (CLP)**

The product is not classified as hazardous according to Regulation EC 1272/2008 (CLP).

Adverse physicochemical, human health and environmental effects:

No other hazards

**2.2. Label elements**

The product is not classified as hazardous according to Regulation EC 1272/2008 (CLP).

**Special Provisions:**

EUH208 Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

EUH208 Contains 2-methylisothiazol-3(2H)-one. May produce an allergic reaction.

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

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

None.

The product has been classified according to Regulation (EC) No 1272/2008 (CLP) as amended by UK CLP Regulation, UK SI 2019/720 and UK SI 2020/1567.

**2.3. Other hazards**

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

No other hazards

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**SECTION 3: Composition/information on ingredients****3.1. Substances**

N.A.

**3.2. Mixtures**

Mixture identification: MIKROS 001

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

Qty	Name	Ident. Numb.	Classification	Registration Number:
≥0.5 - <1 %	Benzene, 1,1'-oxybis-, tetrapropylene derivs., sulfonated, sodium salts	CAS:119345-04-9 EC:601-601-6	Eye Dam. 1, H318; Repr. 2, H361fd; Aquatic Chronic 2, H411	01-2119492361-39-xxxx
≥0.0036 - <0.036 %	1,2-benzisothiazol-3(2H)-one	CAS:2634-33-5 EC:220-120-9 Index:613-088-00-6	Acute Tox. 2, H330 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410, M-Chronic:1, M-Acute:1  Specific Concentration Limits: C ≥ 0.036%: Skin Sens. 1A H317  Acute Toxicity Estimate: ATE - Oral: 450mg/kg bw ATE - Inhalation (Dust/mist): 0.21mg/l	
≥0.00015 - <0.0015 %	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	CAS:55965-84-9 Index:613-167-00-5	Acute Tox. 2, H310 Acute Tox. 2, H330 Acute Tox. 3, H301 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410, M-Chronic:100, M-Acute:100, EUH071  Specific Concentration Limits: 0.6% ≤ C < 100%: Skin Corr. 1C H314 0.06% ≤ C < 0.6%: Skin Irrit. 2 H315 0.6% ≤ C < 100%: Eye Dam. 1 H318 0.06% ≤ C < 0.6%: Eye Irrit. 2 H319 0.0015% ≤ C < 100%: Skin Sens. 1A H317  Acute Toxicity Estimate: ATE - Oral: 66mg/kg bw ATE - Dermal: 141mg/kg bw ATE - Inhalation (Dust/mist): 0.17mg/l	
≥0.00015 - <0.0015 %	2-methylisothiazol-3(2H)-one	CAS:2682-20-4 EC:220-239-6 Index:613-326-00-9	Acute Tox. 2, H330 Acute Tox. 3, H311 Acute Tox. 3, H301 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410, M-Chronic:1, M-Acute:10, EUH071  Specific Concentration Limits: 0.0015% ≤ C < 100%: Skin Sens. 1A H317  Acute Toxicity Estimate: ATE - Oral: 120mg/kg bw ATE - Dermal: 300mg/kg bw ATE - Inhalation (Dust/mist): 0.134mg/l	

Classifications according to Regulation (EC) No 1272/2008 (CLP) as amended by UK CLP Regulation, UK SI 2019/720 and UK SI 2020/1567.

**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:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

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

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**

None known

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

If you feel unwell, seek medical advice.

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

#### **5.1. Extinguishing media**

Suitable extinguishing media:

Product is not flammable.

Extinguishing media which must not be used for safety reasons:

None in particular.

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

Burning produces heavy smoke.

In the event of fire and/or explosion do not breathe fumes.

#### **5.3. Advice for firefighters**

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

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

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

**For non emergency personnel:**

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

**For emergency responders:**

Wear personal protection equipment.

#### **6.2. Environmental precautions**

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

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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

Material suitable for collection: inert absorbent material (e.g. sand, vermiculite)

After the product has been recovered, rinse the area and materials involved with water.

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.

**Advice on general occupational hygiene:**

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 container tightly closed in a cool, well-ventilated place, away from heat.

Keep away from food, drink and feed.

Incompatible materials:

See chapter 10.5

Instructions as regards storage premises:

Adequately ventilated premises.

Protect from frost.

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

Recommendation(s)

See chapter 1.2

Industrial sector specific solutions:

None in particular

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Community Occupational Exposure Limits (OEL)

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

CAS: 55965-84-9	OEL Type	MAK	AUSTRIA	Long Term: 0.05 mg/m <sup>3</sup>
	OEL Type	MAK	GERMANY	Long Term: 0.2 mg/m <sup>3</sup> ; Short Term: 0.4 mg/m <sup>3</sup> Notes: Inhalable fraction
	OEL Type	SUVA	SWITZERLAND	Long Term: 0.2 mg/m <sup>3</sup> ; Short Term: 0.4 mg/m <sup>3</sup> Notes: Inhalable fraction

2-methylisothiazol-3(2H)-one

CAS: 2682-20-4	OEL Type	MAK	AUSTRIA	Long Term: 0.05 mg/m <sup>3</sup>
	OEL Type	MAK	GERMANY	Long Term: 0.2 mg/m <sup>3</sup> ; Short Term: 0.4 mg/m <sup>3</sup> Notes: Inhalable fraction
	OEL Type	SUVA	SWITZERLAND	Long Term: 0.2 mg/m <sup>3</sup> ; Short Term: 0.4 mg/m <sup>3</sup> Notes: Inhalable fraction

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

Benzene, 1,1'-oxybis-, tetrapropylene derivs., sulfonated, sodium salts

CAS: 119345-04-9	Exposure Route: Fresh Water; PNEC Limit: 0.31 mg/l			
	Exposure Route: Marine water; PNEC Limit: 0.03 mg/l			
	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 1 mg/l			
	Exposure Route: Freshwater sediments; PNEC Limit: 3.24 mg/kg			
	Exposure Route: Marine water sediments; PNEC Limit: 0.324 mg/kg			
	Exposure Route: Soil; PNEC Limit: 0.63 mg/kg			

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

Benzene, 1,1'-oxybis-, tetrapropylene derivs., sulfonated, sodium salts

CAS: 119345-04-9	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Professional: 4.4 mg/m <sup>3</sup> ; Consumer: 1.1 mg/m <sup>3</sup>			
	Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects Worker Professional: 1.2 mg/kg; Consumer: 0.6 mg/kg			
	Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects Consumer: 0.6 mg/kg			

### 8.2. Exposure controls

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction.

Eye protection:

Eye glasses with side protection (EN 166).

Protection for skin:

Use suitable clothing that provides complete protection to the skin according to activity and exposure (EN 14605/EN 13982), e.g. overall, apron, safety shoes, suitable clothing.

Protection for hands:

There is no material or combination of materials for gloves that can guarantee unlimited resistance to any individual chemical or combination of chemicals.

For prolonged or repeated handling, use chemical resistant gloves.

Suitable materials for safety gloves (EN 374/EN 16523); Butyl caoutchouc (butyl rubber): thickness  $\geq$  0.4 mm; permeation time  $\geq$  480 min. NBR (Nitril rubber): thickness  $\geq$  0.4 mm; permeation time  $\geq$  480 min

The choice of suitable gloves does not only depend on the material, but also on other quality characteristics that vary from one manufacturer to another and on the manner and times according to which the mixture is used.

Respiratory protection:

If workers are exposed to concentrations above the exposure limit they must use appropriate, certified respirators.

Combination filtering device (EN 14387).

Environmental exposure controls:

See point 6.2

Hygienic and Technical measures

See section 7.

## SECTION 9: Physical and chemical properties

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

Physical State: Liquid  
Appearance: Liquid  
Color: whitish  
Odour: Characteristic  
Odour threshold: N.D.  
Melting point/freezing point: N.D.  
Boiling point or initial boiling point and boiling range: N.D.  
Flammability: Non-flammable  
Lower and upper explosion limit: N.D.  
Flash point: > 93°C ( Internal assessment )  
Auto-ignition temperature: N.D.  
Decomposition temperature: N.D.  
pH:  $\geq 7.00 \leq 8.00$  ( Internal method )  
Kinematic viscosity:  $\leq 20.5 \text{ mm}^2/\text{s}$  (40 °C)  
Density and/or relative density:  $1.00 \div 1.05 \text{ kg/l}$  ( Internal method )  
Relative vapour density: N.D.  
Vapour pressure: N.D.  
Solubility in water: miscible in all ratio  
Solubility in oil: No data available  
Partition coefficient n-octanol/water (log value): N.A.

#### Particle characteristics:

Particle size: N.A.

### 9.2. Other information

Conductivity: N.D.  
Explosive properties: N.A. ( Internal assessment )  
Oxidizing properties: N.A. ( Internal assessment )  
Evaporation rate: N.A.

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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

Keep away from heat sources.

### 10.5. Incompatible materials

None in particular.

### 10.6. Hazardous decomposition products

No hazardous decomposition products when stored and handled correctly.  
See chapter 5.2

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## SECTION 11: Toxicological information

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

Information on hazard classes as defined in the retained Regulation (EC) No 1272/2008 (CLP) as amended by UK CLP Regulation, UK SI 2019/720 and UK SI 2020/1567.

#### Toxicological Information of the Preparation

a) acute toxicity	Not classified Based on available data, the classification criteria are not met
b) skin corrosion/irritation	Not classified Based on available data, the classification criteria are not met
c) serious eye damage/irritation	Not classified Based on available data, the classification criteria are not met
d) respiratory or skin sensitisation	Not classified Based on available data, the classification criteria are not met
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	Not classified Based on available data, the classification criteria are not met
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:

Benzene, 1,1'-oxybis-, tetrapropylene derivs., sulfonated, sodium salts

CAS: 119345-04-9 a) acute toxicity LD50 Skin Rabbit > 2000 mg/kg  
LD50 Oral Rat > 2000 mg/kg

1,2-benzisothiazol-3(2H)-one

CAS: 2634-33-5 a) acute toxicity ATE - Oral: 450 mg/kg bw  
ATE - Inhalation (Dust/mist): 0.21 mg/l

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

CAS: 55965-84-9 a) acute toxicity ATE - Oral: 66 mg/kg bw  
ATE - Dermal: 141 mg/kg bw  
ATE - Inhalation (Dust/mist): 0.17 mg/l

2-methylisothiazol-3(2H)-one

CAS: 2682-20-4 a) acute toxicity ATE - Oral: 120 mg/kg bw  
ATE - Dermal: 300 mg/kg bw  
ATE - Inhalation (Dust/mist): 0.134 mg/l

#### 11.2 Information on other hazards

##### Endocrine disrupting properties:

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

## SECTION 12: Ecological information

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

### 12.1. Toxicity

Eco-Toxicological Information:

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

Not classified for environmental hazards.

No data available for the product

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

Benzene, 1,1'-oxybis-, tetrapropylene derivs., sulfonated, sodium salts

CAS: 119345-04-9 a) Aquatic acute toxicity: LC50 Fish 6.2 mg/l 96h  
a) Aquatic acute toxicity: LC50 Daphnia 1.64 mg/l 48h  
b) Aquatic chronic toxicity: NOEC Fish 0.15 mg/l - 33d  
b) Aquatic chronic toxicity: NOEC Daphnia 1 mg/l 21d

1,2-benzisothiazol-3(2H)-one

CAS: 2634-33-5 a) Aquatic acute toxicity: LC50 Fish 2.2 mg/l 96h  
a) Aquatic acute toxicity: EC50 Daphnia 3.27 mg/l 48h  
a) Aquatic acute toxicity: EC50 Algae 0.11 mg/l 72h  
b) Aquatic chronic toxicity: NOEC Fish 0.21 mg/l - 28d  
b) Aquatic chronic toxicity: NOEC Daphnia 1.2 mg/l - 21d  
b) Aquatic chronic toxicity: NOEC Algae 0.04 mg/l 72h

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

CAS: 55965-84-9 a) Aquatic acute toxicity: LC50 Fish 0.22 mg/l 96h  
a) Aquatic acute toxicity: EC50 Daphnia 0.1 mg/l 48h

- a) Aquatic acute toxicity: EC50 Algae 0.0052 mg/l 48h
- a) Aquatic acute toxicity: EC50 Freshwater algae 0.048 mg/l 72h
- b) Aquatic chronic toxicity: NOEC Fish 0.098 mg/l - 28d
- b) Aquatic chronic toxicity: NOEC Daphnia 0.004 mg/l - 21d
- b) Aquatic chronic toxicity: NOEC Algae 0.00064 mg/l 48h
- b) Aquatic chronic toxicity: NOEC Freshwater algae 0.0012 mg/l 72h

2-methylisothiazol-3(2H)-one

- CAS: 2682-20-4
- a) Aquatic acute toxicity: LC50 Fish 6 mg/l 96h
  - a) Aquatic acute toxicity: EC50 Daphnia 1.68 mg/l 48h
  - a) Aquatic acute toxicity: EC50 Algae 0.157 mg/l 72h
  - b) Aquatic chronic toxicity: NOEC Fish 2.1 mg/l - 28d
  - b) Aquatic chronic toxicity: NOEC Daphnia 0.55 mg/l - 21d
  - b) Aquatic chronic toxicity: NOEC Algae 0.03 mg/l 72h

## 12.2. Persistence and degradability

1,2-benzisothiazol-3(2H)-one

CAS: 2634-33-5 Non-readily biodegradable

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

CAS: 55965-84-9 Non-readily biodegradable

2-methylisothiazol-3(2H)-one

CAS: 2682-20-4 Readily biodegradable

## 12.3. Bioaccumulative potential

N.A.

## 12.4. Mobility in soil

N.A.

## 12.5. Results of PBT and vPvB assessment

No PBT or vPvB 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

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.

Do not allow it to enter drains or watercourses.

Dispose of containers contaminated by the product in accordance with local or national legal provisions.

Once the product has expired, it must be disposed of in accordance with current legislation.

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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

N/A

## 14.2. UN proper shipping name

ADR-Shipping Name: N/A

IATA-Shipping Name: N/A

IMDG-Shipping Name: N/A

## 14.3. Transport hazard class(es)

ADR-Class: N/A

IATA-Class: N/A

IMDG-Class: N/A

## 14.4. Packing group

ADR-Packing Group: N/A

IATA-Packing group: N/A

IMDG-Packing group: N/A

## 14.5. Environmental hazards

Marine pollutant: No  
Environmental Pollutant: No  
IMDG-EMS: N/A

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

Road and Rail (ADR-RID):

ADR exempt:  
ADR-Label: N/A  
ADR - Hazard identification number: N/A  
ADR-Special Provisions: N/A  
ADR-Transport category (Tunnel restriction code):

Air (IATA):

IATA-Passenger Aircraft: N/A  
IATA-Cargo Aircraft: N/A  
IATA-Label: N/A  
IATA-Subsidiary hazards: N/A  
IATA-Erg: N/A  
IATA-Special Provisions: N/A

Sea (IMDG):

IMDG-Stowage and handling: N/A  
IMDG-Segregation: N/A  
IMDG-Subsidiary hazards: N/A  
IMDG-Special Provisions: N/A

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

N.A.

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### **SECTION 15: Regulatory information**

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

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

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

Directive 2010/75/EU

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

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

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

Regulation (EU) n. 2020/878

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. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Regulation (EU) n. 2021/849 (ATP 17 CLP)

Regulation (EU) n. 2022/692 (ATP 18 CLP)

Regulation (EU) n. 2023/1434 (ATP 19 CLP)

Regulation (EU) n. 2023/1435 (ATP 20 CLP)

Regulation (EU) n. 2024/197 (ATP 21 CLP)

**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 (CAS 50-00-0), 30 (CAS 13463-41-7), 72, 75

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

None

**Regulation (EU) No 649/2012 (PIC regulation)**



No substances listed

#### German Water Hazard Class.

Class 3: extremely hazardous.

#### SVHC Substances:

On the basis of available data, the product does not contain any SVHC in percentage  $\geq 0.1\%$ .

#### VOC content limit value (Directive 2004/42/EC) Cat. A/h: 30 g/l; COV < 1 g/l

Relevant EU provisions transposed through retained EU legislation:

UK REACH List of restrictions (Annex XVII);

UK REACH Candidate list of substances of very high concern (SVHC) for authorisation;

UK REACH List of substances subject to authorisation (Annex XIV);

Export and import of hazardous chemicals - Prior informed consent (PIC regulation).

#### 15.2. Chemical safety assessment

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

### SECTION 16: Other information

Code	Description
EUH071	Corrosive to the respiratory tract.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
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.
H330	Fatal if inhaled.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
3.1/2/Dermal	Acute Tox. 2	Acute toxicity (dermal), Category 2
3.1/2/Inhal	Acute Tox. 2	Acute toxicity (inhalation), Category 2
3.1/3/Dermal	Acute Tox. 3	Acute toxicity (dermal), Category 3
3.1/3/Oral	Acute Tox. 3	Acute toxicity (oral), Category 3
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
3.2/1C	Skin Corr. 1C	Skin corrosion, Category 1C
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
3.4.2/1A	Skin Sens. 1A	Skin Sensitisation, Category 1A
3.7/2	Repr. 2	Reproductive toxicity, Category 2
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/C2	Aquatic Chronic 2	Chronic (long term) aquatic hazard, category 2

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

Safety data sheets of raw materials suppliers.

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 MSDS 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.  
ATE: Acute Toxicity Estimate  
ATEmix: Acute toxicity Estimate (Mixtures)  
BEI: Biological Exposure Index  
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  
COV: Volatile Organic Compound  
CSA: Chemical Safety Assessment  
CSR: Chemical Safety Report  
DNEL: Derived No Effect Level.  
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.  
IC50: half maximal inhibitory concentration  
IMDG: International Maritime Code for Dangerous Goods.  
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  
N.D.: 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.  
TLV-TWA: 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:**

- SECTION 1: Identification of the substance/mixture and of the company/undertaking
- SECTION 2: Hazards identification
- SECTION 3: Composition/information on ingredients
- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties
- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 14: Transport information
- SECTION 15: Regulatory information
- SECTION 16: Other information