

## Safety Data Sheet

### EPORIP comp.B

Safety Data Sheet dated: 07/02/2023 - version 4



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

### 1.1. Product identifier

Mixture identification:

Trade name: EPORIP comp.B

Trade code: 901531

UFI: E5C0-R084-G003-NFSM

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

Recommended use: Hardener for epoxy products

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

phone: +44(0)121 508 6970 - fax: +44(0)121 5086 960 - 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)333 333 9962

## SECTION 2: Hazards identification



### 2.1. Classification of the substance or mixture

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

Skin Corr. 1B	Causes severe skin burns and eye damage.
Eye Dam. 1	Causes serious eye damage.
Skin Sens. 1A	May cause an allergic skin reaction.
Aquatic Acute 1	Very toxic to aquatic life.
Aquatic Chronic 1	Very toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

### 2.2. Label elements

#### Regulation (EC) No 1272/2008 (CLP):

#### Pictograms and Signal Words



Danger

#### Hazard statements

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H410	Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

P261	Avoid breathing mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/clothing and eye/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER.
P391	Collect spillage.

#### Special Provisions:

**Contains**

Fatty acids C18 unsaturated, reaction products with tetraethylenepentamine

triethylenetetramine

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine

2,4,6-tris(dimethylaminomethyl)phenol

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

Restricted to professional users.

**2.3. Other hazards**

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%

Other Hazards: No other hazards

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

**3.1. Substances**

Not Relevant

**3.2. Mixtures**

Mixture identification: EPORIP comp.B

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

Qty	Name	Ident. Numb.	Classification	Registration Number
≥50 - <75 %	Fatty acids C18 unsaturated, reaction products with tetraethylenepentamine	CAS:1226892-45-0, 68410-23-1 EC:629-725-6	Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Corr. 1C, H314; Skin Sens. 1A, H317, M-Chronic:1, M-Acute:10	01-2119487006-38-xxxx
≥5 - <10 %	triethylenetetramine	CAS:90640-67-8, 112-24-3 EC:292-588-2	Acute Tox. 4, H312; Acute Tox. 4, H302; Skin Corr. 1B, H314; Skin Sens. 1, H317; Aquatic Chronic 3, H412, EUH071	01-2119487919-13-XXXX
≥2.5 - <5 %	N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine	CAS:10563-29-8 EC:234-148-4	Acute Tox. 4, H302; Skin Corr. 1A, H314; Skin Sens. 1B, H317	01-2119970376-29-XXXX
≥2.5 - <5 %	2,4,6-tris(dimethylaminomethyl)phenol	CAS:90-72-2 EC:202-013-9 Index:603-069-00-0	Skin Corr. 1C, H314; Eye Dam. 1, H318; Acute Tox. 4, H302	01-2119560597-27-XXXX

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

In case of skin contact:

- Immediately take off all contaminated clothing.
- OBTAIN IMMEDIATE MEDICAL ATTENTION.
- 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:

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

**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.

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

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

triethylenetetramine      Exposure Route: Marine water sediments; PNEC Limit: 0,123 mg/kg  
CAS: 90640-67-8, 112-  
24-3

Exposure Route: Freshwater sediments; PNEC Limit: 2,08 mg/kg

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 8 mg/l

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine  
CAS: 10563-29-8

Exposure Route: Fresh Water; PNEC Limit: 0,0092 mg/l

Exposure Route: Marine water; PNEC Limit: 0,00092 mg/l

Exposure Route: Intermittent release; PNEC Limit: 0,092 mg/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 18,1 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 0,0336 mg/kg

### Derived No Effect Level (DNEL) values

triethylenetetramine  
CAS: 90640-67-8, 112-24-3

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects  
Worker Professional: 5,38 mg/l

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects  
Worker Professional: 0,57 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects  
Consumer: 20 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects  
Consumer: 8 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects  
Consumer: 1,6 mg/l

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine  
CAS: 10563-29-8

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects  
Worker Industry: 3,7 mg/m<sup>3</sup>; Consumer: 0,65 mg/m<sup>3</sup>

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects  
Worker Industry: 7,5 mg/m<sup>3</sup>

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects  
Worker Industry: 3,7 mg/m<sup>3</sup>; Consumer: 0,65 mg/m<sup>3</sup>

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects  
Worker Industry: 0,67 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects  
Consumer: 0,2 mg/kg

2,4,6-tris(dimethylaminomethyl)phenol  
CAS: 90-72-2

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects  
Worker Industry: 0,31 mg/m<sup>3</sup>

## 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  $\geq 480\text{min}$ .

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 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.

Hygienic and Technical measures

Not available

Appropriate engineering controls:

Not available

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## SECTION 9: Physical and chemical properties

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

Physical state: Liquid  
Appearance: liquid  
Color: white  
Odour: ammonia  
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: 100 °C (212 °F)  
Auto-ignition temperature: Not available  
Decomposition temperature: Not available  
pH: 10.00  
Viscosity: 1,500.00 cPs  
Kinematic viscosity: Not available  
Solubility in water: partly soluble  
Solubility in oil: soluble  
Partition coefficient (n-octanol/water): Not available  
Vapour pressure: 0.01  
Relative density: 1.02 g/cm<sup>3</sup>  
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

#### Toxicological Information of the Preparation

a) acute toxicity	Not classified Based on available data, the classification criteria are not met
b) skin corrosion/irritation	The product is classified: Skin Corr. 1B(H314)
c) serious eye damage/irritation	The product is classified: Eye Dam. 1(H318)
d) respiratory or skin sensitisation	The product is classified: Skin Sens. 1A(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	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:**

Fatty acids C18 unsaturated, reaction products with tetraethylenepentamine	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg
triethylenetetramine	a) acute toxicity	LD50 Skin Rabbit = 1465 mg/kg LD50 Oral Rat = 1716 mg/kg
N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine	a) acute toxicity	LD50 Oral Rat = 1670 mg/kg
	b) skin corrosion/irritation	Skin Corrosive Skin Rabbit Positive
	d) respiratory or skin sensitisation	Skin Sensitization Skin Positive
2,4,6-tris(dimethylaminomethyl)phenol	a) acute toxicity	LD50 Oral Rat = 2169 mg/kg
		LD50 Skin Rat > 1, ml/kg

**11.2. Information on other hazards**

**Endocrine disrupting properties:**

No endocrine disruptor substances present in concentration >= 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:

Very toxic to aquatic organisms.

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

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

The product is classified: Aquatic Acute 1(H400), Aquatic Chronic 1(H410)

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

Component	Ident. Numb.	Ecotox Data
triethylenetetramine	CAS: 90640-67-8, 112-24-3 - EINECS: 292-588-2	a) Aquatic acute toxicity : EC50 Daphnia = 31,1 mg/L 48h
N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine	CAS: 10563-29-8 - EINECS: 234-148-4	a) Aquatic acute toxicity : LC50 Fish = 215 mg/L 96
		a) Aquatic acute toxicity : EC50 Daphnia = 9,2 mg/L 48
		a) Aquatic acute toxicity : EC50 Algae = 21 mg/L 72
2,4,6-tris(dimethylaminomethyl)phenol	CAS: 90-72-2 - EINECS: 202-013-9 - INDEX: 603-069-00-0	a) Aquatic acute toxicity : LC50 Fish Danio rerio > 100 mg/L 96h ECHA
		a) Aquatic acute toxicity : LC50 Fish = 175 mg/L 96h
		a) Aquatic acute toxicity : EC50 Algae = 46,7 mg/L 72h

## 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 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

### 14.1. UN number or ID number

2735

### 14.2. UN proper shipping name

ADR-Shipping Name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (adducted polyamide)

IATA-Technical name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (adducted polyamide)

IMDG-Technical name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (adducted polyamide)

### 14.3. Transport hazard class(es)

ADR-Class: 8

IATA-Class: 8

IMDG-Class: 8

### 14.4. Packing group

ADR-Packing Group: II

IATA-Packing group: II

IMDG-Packing group: II

### 14.5. Environmental hazards

Most important toxic component: adducted polyamide

Marine pollutant: Yes

Environmental Pollutant: Yes

IMDG-EMS: F-A, S-B

#### 14.6. Special precautions for user

Road and Rail (ADR-RID):

ADR exempt: No

ADR-Label: 8

ADR-Hazard identification number: 80

ADR-Special Provisions: 274

ADR-Transport category (Tunnel restriction code): 2 (E)

Air (IATA):

IATA-Passenger Aircraft: 851

IATA-Cargo Aircraft: 855

IATA-Label: 8

IATA-Subsidiary hazards: -

IATA-Erg: 8L

IATA-Special Provisions: A3 A803

Sea (IMDG):

IMDG-Stowage Code: Category A

IMDG-Stowage Note: SG35

IMDG-Subsidiary hazards: -

IMDG-Special Provisions: 274

IMDG-EMS: F-A, S-B

#### 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

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)

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

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

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

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

Seveso III category according to Annex 1, part 1	Lower-tier threshold (tonnes)	Upper-tier threshold (tonnes)
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Product belongs to category: E1	100	200
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#### 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

Restrictions related to the substances contained: 28, 29, 40, 75

#### SVHC Substances:

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

### National regulations

Produktregisteret Norge: 52875

MAL-kode: 5-5; A+B (3:1)=3-5 (1993)

Lagerklasse (TRGS-510): 8B - Non-combustible corrosive substances

### German Water Hazard Class.

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
EUH071	Corrosive to the respiratory tract.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
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
3.1/4/Dermal	Acute Tox. 4	Acute toxicity (dermal), Category 4
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/1A	Skin Corr. 1A	Skin corrosion, Category 1A
3.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
3.2/1C	Skin Corr. 1C	Skin corrosion, Category 1C
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.4.2/1A	Skin Sens. 1A	Skin Sensitisation, Category 1A
3.4.2/1B	Skin Sens. 1B	Skin Sensitisation, Category 1B
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
3.2/1B	Calculation method
3.3/1	Calculation method
3.4.2/1A	Calculation method
4.1/A1	Calculation method
4.1/C1	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.

**Paragraphs modified from the previous revision:**

- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties
- SECTION 15: Regulatory information

- SECTION 16: Other information