

## Safety Data Sheet

### POLYISOCIANATE HARDENER FOR BICOMPONENT WATER BASED PRODUCTS

Safety Data Sheet dated 09/06/2021 version 3



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

### 1.1. Product identifier

Mixture identification:

Trade name: POLYISOCIANATE HARDENER FOR BICOMPONENT WATER BASED PRODUCTS

Trade code: CA507

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

Recommended use: Hardener for professional/industrial use

Uses advised against: N.A.

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

Company: INDUSTRIA CHIMICA ADRIATICA S.P.A.

Via S. Pertini, 52

62012 Civitanova Marche (MC) Italy

tel: +39 0733 8080

fax: +39 0733 808140

Responsible: regulatoryaffairs@icaspa.com - INDUSTRIA CHIMICA ADRIATICA S.p.A.

### 1.4. Emergency telephone number

Anti-poison centre - Hospital of Florence (24/24 hours)

Telephone +39 055 794 7819

## SECTION 2: Hazards identification



### 2.1. Classification of the substance or mixture

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

Flam. Liq. 3 Flammable liquid and vapour.  
Acute Tox. 4 Harmful if inhaled.  
Skin Sens. 1 May cause an allergic skin reaction.  
STOT SE 3 May cause respiratory irritation.  
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

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

#### Pictograms and Signal Words



Warning

#### Hazard statements

H226 Flammable liquid and vapour.  
H317 May cause an allergic skin reaction.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H412 Harmful to aquatic life with long lasting effects.

#### Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/clothing and eye/face protection.

P370+P378 In case of fire, use a foam fire extinguisher to extinguish.

P403+P235 Store in a well-ventilated place. Keep cool.

#### Contains

Aliphatic polyisocyanate

Hexamethylene-1,6-diisocyanate

Homopolymer

Cyclohexyldimethylamine

Hexamethylene-1,6-diisocyanate

#### Dir. 2004/42/EC (VOC directive)

This product contains max 333 g/l VOC.

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

##### 2.3. Other hazards

No PBT Ingredients are present

Other Hazards: No other hazards

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### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

N.A.

#### 3.2. Mixtures

Mixture identification: POLYISOCIANATE HARDENER FOR BICOMPONENT WATER BASED PRODUCTS

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

Qty	Name	Ident. Numb.	Classification	Registration Number
25-35 %	Aliphatic polyisocyanate	CAS:666723-27-9	Skin Sens. 1, H317; Acute Tox. 4, H332; STOT SE 3, H335; Aquatic Chronic 3, H412; Aquatic Chronic 3, H412	
25-35 %	Hexamethylene-1,6-diisocyanate Homopolymer	CAS:3779-63-3 EC:223-242-0	Skin Sens. 1, H317; Acute Tox. 4, H332; STOT SE 3, H335	
10-15 %	1-methoxy-2-propanol acetate	CAS:108-65-6 EC:203-603-9 Index:607-195-00-7	Flam. Liq. 3, H226	01-2119475791-29-XXXX
< 3%	Cyclohexyldimethylamine	CAS:98-94-2 EC:202-715-5	Flam. Liq. 3, H226; Acute Tox. 3, H301; Acute Tox. 3, H311; Skin Corr. 1B, H314; Acute Tox. 3, H331; Aquatic Chronic 2, H411; Skin Corr. 1B, H314; Acute Tox. 3, H331; Aquatic Chronic 2, H411; Aquatic Chronic 2, H411	01-2119533030-60-XXXX
< 3%	Hexamethylene-1,6-diisocyanate	CAS:822-06-0 EC:212-485-8 Index:615-011-00-1	Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Irrit. 2, H319; Acute Tox. 1, H330; Resp. Sens. 1, H334; STOT SE 3, H335; STOT SE 3, H335	01-2119457571-37-XXXX

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### 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.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

Wash immediately with water.

In case of Ingestion:

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

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

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**

N.A.

#### **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).

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

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

Suitable extinguishing media:

In case of fire, use a foam fire extinguisher to extinguish.

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.

Burning produces heavy smoke.

#### **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**

Wear personal protection equipment.

Remove all sources of ignition.

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

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

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

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

Retain contaminated washing water and dispose it.

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

Suitable material for taking up: absorbing material, organic, sand

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

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

#### **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**

Always keep in a well ventilated place.

Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

#### **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

#### Community Occupational Exposure Limits (OEL)

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	Notes
1-methoxy-2-propanol acetate	EU		C	275	50	550	100	
	NATIONAL	BARBADOS	C	270	50			
	NATIONAL	ANTIGUA AND BARBUDA	C	275	50	550	100	
Hexamethylene-1,6- diisocyanate	NATIONAL	ANTARCTICA	C	275	50	550	100	
	NATIONAL	ALBANIA	C	0,035	0,005	0,035	0,005	
	NATIONAL	BELARUS	C	0,035		0,035		
	NATIONAL	AUSTRIA	C	0,02	0,002	0,03	0,005	
	NATIONAL	BOTSWANA	C	0,035	0,005	0,035		
	NATIONAL	AZERBAIJAN	C	0,02		0,07		
	NATIONAL	BRAZIL	C	0,03	0,005	0,07	0,01	
	NATIONAL	BONAIRE, SINT EUSTATIUS AND SABA	C	0,05				
	NATIONAL	CANADA	C	0,1				
	NATIONAL	BOUVET ISLAND	C	0,035		0,07		
	NATIONAL	ANTIGUA AND BARBUDA	C	0,035	0,005	0,07	0,01	
	NATIONAL	BAHAMAS	C	0,03	0,005	0,07	0,01	
	NATIONAL	BARBADOS	C	0,035	0,005			
	ACGIH		C	0,034	0,005			
	NATIONAL	ARGENTINA	C	0,035	0,005			
	NATIONAL	AFGHANISTAN	C	0,034	0,005			
NATIONAL	ANGUILLA	C	0,075	0,01	0,15	0,02		
NATIONAL	ARMENIA	C	0,02		0,07			

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

Component	CAS-No.	PNEC LIMIT	Exposure Route	Exposure Frequency	Remark
1-methoxy-2-propanol acetate	108-65-6	0,29 mg/kg	Soil (agricultural)		
		0,635 mg/l	Water		
		6,35 mg/l	WATER, INTERMITTING RELEASE		
		0,064 mg/l	Water		
		3,29 mg/kg	Air		
		0,329 mg/kg	Marine water sediments		
		100 mg/l	Microorganisms in sewage treatments		
Cyclohexyldimethylamine	98-94-2	0,021 mg/kg	Food chain		
		0,0021 mg/kg	Soil (agricultural)		
		0,002 mg/l	Water		
		0,02 mg/l	WATER, INTERMITTING RELEASE		
		0,0002 mg/l	Water		
		20,6 mg/l	Microorganisms in sewage treatments		

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

Component	CAS-No.	Worker Industry	Worker Professional	Consumer	Exposure Route	Exposure Frequency	Remark
1-methoxy-2-propanol acetate	108-65-6			500 mg/kg	Human Oral	Short Term, systemic effects	
				796 mg/kg	Human Dermal	Long Term, systemic effects	
				550 mg/m3	Human Inhalation	Long Term, local effects	
				275 mg/m3	Human Inhalation	Long Term, systemic effects	
Cyclohexyldimethylamine	98-94-2				Human Oral	Long Term, systemic effects	
				0,600 mg/kg	Human Dermal	Long Term, systemic effects	
				8,3 mg/m3	Human Inhalation	Long Term, local effects	
		0,530 mg/m3	Human Inhalation	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:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Use adequate protective respiratory equipment.

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

Hygienic and Technical measures

N.A.

## SECTION 9: Physical and chemical properties

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

Physical State Liquid

Appearance and colour: transparent

Odour: N.A.

Odour threshold: N.A.

pH: N.A.

Melting point / freezing point: N.A.

Initial boiling point and boiling range: N.A.

Flash point: 23°C / 60°C

Evaporation rate: N.A.

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

Vapour density: N.A.

Vapour pressure: N.A.

Relative density: 1.11 g/ml

Solubility in water: N.A.

Solubility in oil: N.A.

Partition coefficient (n-octanol/water): N.A.

Auto-ignition temperature: N.A.

Decomposition temperature: N.A.

Viscosity: N.A.

Explosive properties: N.A.

Oxidizing properties: N.A.

Solid/gas flammability: N.A.

VOC content (g/L) in the product (2010/75/UE) 333.00

VOC content % in the product (2010/75/UE) 30.00

## 9.2. Other information

Substance Groups relevant properties N.A.

Miscibility: N.A.

Conductivity: N.A.

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions

### 10.2. Chemical stability

Data not available.

### 10.3. Possibility of hazardous reactions

None.

### 10.4. Conditions to avoid

Stable under normal conditions.

### 10.5. Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

### 10.6. Hazardous decomposition products

None.

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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Toxicological Information of the Preparation

a) acute toxicity	The product is classified: Acute Tox. 4(H332)
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	The product is classified: Skin Sens. 1(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:

Aliphatic polyisocyanate	a) acute toxicity	LD50 Oral Rat > 5000 mg/kg
	j) aspiration hazard	LC50 Inhalation Rat 0,39 mg/l 4h
Hexamethylene-1,6-diisocyanate Homopolymer	a) acute toxicity	LD50 Oral Rat > 5000 mg/kg
1-methoxy-2-propanol acetate	a) acute toxicity	LD50 Oral Rat > 5000 mg/kg
	b) skin corrosion/irritation	LD50 Skin Rabbit > 5000 mg/kg
	j) aspiration hazard	LC50 Inhalation Vapour Rat > 10,6 mg/l 6h
Cyclohexyldimethylamine	a) acute toxicity	LD50 Oral Rat 280 mg/kg
	b) skin corrosion/irritation	LD50 Skin Rat 380 mg/kg
	j) aspiration hazard	LC50 Inhalation Vapour Rat 3,75 mg/l 1h

Hexamethylene-1,6-diisocyanate	a) acute toxicity	LD50 Oral Rat 746 mg/kg
	b) skin corrosion/irritation	LD50 Skin Rabbit > 7000 mg/kg
	j) aspiration hazard	LC50 Inhalation Vapour Rat 0,124 mg/l 4h

## 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

The product is classified: Aquatic Chronic 3(H412)

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

Component	Ident. Numb.	Ecotox Data
Aliphatic polyisocyanate	CAS: 666723-27-9	a) Aquatic acute toxicity : EC50 Daphnia > 100 mg/L 48h - Daphnia magna  b) Aquatic chronic toxicity : IC50 Algae 72 mg/L 72h - Desmodesmus subspicatus  a) Aquatic acute toxicity : LC50 Fish 35,2 mg/L 96h - Fish
1-methoxy-2-propanol acetate	CAS: 108-65-6 - EINECS: 203-603-9 - INDEX: 607-195-00-7	a) Aquatic acute toxicity : EC50 Daphnia > 500 mg/L 48h - Daphnia Magna  b) Aquatic chronic toxicity : IC50 Algae > 1000 mg/L 72h - Selenastrum capricornutum  a) Aquatic acute toxicity : LC50 Fish > 100 mg/L 96h - Fish b) Aquatic chronic toxicity : NOEC Fish 475 mg/L - Oryzias latipes
Cyclohexyldimethylamine	CAS: 98-94-2 - EINECS: 202-715-5	a) Aquatic acute toxicity : EC50 Daphnia 75 mg/L 48h  b) Aquatic chronic toxicity : IC50 Algae 1395 mg/L 72h a) Aquatic acute toxicity : LC50 Fish 65,8 mg/L 96h b) Aquatic chronic toxicity : NOEC Algae 62,5 mg/L b) Aquatic chronic toxicity : NOEC Fish 21,5 mg/L
Hexamethylene-1,6-diisocyanate	CAS: 822-06-0 - EINECS: 212-485-8 - INDEX: 615-011-00-1	b) Aquatic chronic toxicity : NOEC Algae 11,7 mg/L - Algae

### 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 Ingredients are present

### 12.6. Other adverse effects

N.A.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

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## SECTION 14: Transport information

### 14.1. UN number

1866

### 14.2. UN proper shipping name

ADR-Shipping Name: RESIN SOLUTION, flammable (having a flash- point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)

IATA-Technical name: RESIN SOLUTION flammable

IMDG-Technical name: RESIN SOLUTION flammable

### 14.3. Transport hazard class(es)

ADR-Class: 3

IATA-Class: 3

IMDG-Class: 3

### 14.4. Packing group

ADR-Packing Group: III

IATA-Packing group: III

IMDG-Packing group: III

### 14.5. Environmental hazards

Toxic ingredients quantity: 0.00

Very toxic ingredients quantity: 0.00

Marine pollutant: No

Environmental Pollutant: No

### 14.6. Special precautions for user

Road and Rail (ADR-RID):

ADR exempt:

ADR-Label: 3

ADR - Hazard identification number: 30

ADR-Special Provisions: -

ADR-Transport category (Tunnel restriction code):

Air (IATA):

IATA-Passenger Aircraft: 355

IATA-Cargo Aircraft: 366

IATA-Label: 3

IATA-Subsidiary hazards: -

IATA-Erg: 3L

IATA-Special Provisions: A3

Sea (IMDG):

IMDG-Stowage Code: Category A

IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisions: 223 955

IMDG-Page: N/A

IMDG-Label: N/A

IMDG-EMS: F-E, S-E

IMDG-MFAG: 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

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 (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. 2018/1480 (ATP 13 CLP)  
 Regulation (EU) n. 2019/521 (ATP 12 CLP)  
 Regulation (EU) 2015/830

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: None.

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

**Seveso III category according to Annex 1, part 1**

Product belongs to category: P5c	5000	Upper-tier threshold (tonnes)	50000
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Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

Class 3: extremely hazardous.

SVHC Substances:

No data available

**Dir. 2004/42/EC (VOC directive)**

(ready to use)

Volatile Organic compounds - VOCs = 30.00 %

Volatile Organic compounds - VOCs = 333.00 g/L

Estimated Total Content of Water

0.00

**15.2. Chemical safety assessment**

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

**SECTION 16: Other information**

<b>Code</b>	<b>Description</b>
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful 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.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

<b>Code</b>	<b>Hazard class and hazard category</b>	<b>Description</b>
2.6/3	Flam. Liq. 3	Flammable liquid, Category 3
3.1/1/Inhal	Acute Tox. 1	Acute toxicity (inhalation), Category 1
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
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4

3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.1/1	Resp. Sens. 1	Respiratory Sensitisation, Category 1
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
4.1/C2	Aquatic Chronic 2	Chronic (long term) aquatic hazard, category 2
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**

2.6/3	On basis of test data
3.1/4/Inhal	Calculation method
3.4.2/1	Calculation method
3.8/3	Calculation method
4.1/C3	Calculation method

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

Main bibliographic sources:

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

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

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

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

This 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.

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.