

## Safety Data Sheet

### RASCO BITUMENDACHLACK

Safety Data Sheet dated: 09/03/2022 - version 2

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

### 1.1. Product identifier

Mixture identification:

Trade name: RASCO BITUMENDACHLACK

Trade code: 9050711

UFI: V220-A0AQ-D00U-Q4S4

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

Recommended use: Two-component bituminous coating

Uses advised against: Data not available

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

Company: Rasco Bitumentchnik GmbH, Otto-von-Guericke-Ring 11, D-65205 Wiesbaden, Germany

phone: +49-05237 608 0 - fax: +49-05237 608 210 (office hours)

Responsible: rasco@bitumenttechnik.de

### 1.4. Emergency telephone number

Poison emergency call Berlin +4930 30686700 (Advice in German and English)

## SECTION 2: Hazards identification



### 2.1. Classification of the substance or mixture

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

Skin Sens. 1A May cause an allergic skin reaction.

Adverse physicochemical, human health and environmental effects:

No other hazards

### 2.2. Label elements

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

#### Pictograms and Signal Words



Warning

#### Hazard statements:

H317 May cause an allergic skin reaction.

#### Precautionary statements:

P261 Avoid breathing mist/vapours/spray.

P280 Wear protective gloves/clothing and eye/face protection.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

P501 Dispose of contents/container in accordance with applicable regulations.

#### Contains:

2-octyl-2H-isothiazol-3-one

#### 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

This product contains crystalline silica (quartz sand). IARC has classified crystalline silica as a Group 1 carcinogen. Both IARC and NTP consider silica as a known human carcinogen. Evidence is based on the chronic and long-term exposure workers have had to respirable sized crystalline silica dust particles. Because this product is in liquid or paste form, it does not pose a dust hazard; therefore, this classification is not relevant. (Note: sanding of the hardened product may create a silica dust hazard)

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not Relevant

### 3.2. Mixtures

Mixture identification: RASCO BITUMENDACHLACK

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

Concentration (% w/w)	Name	Ident. Numb.	Classification	Registration Number
≥0.0015 - <0.005 %	ethylene glycol	CAS:107-21-1 EC:203-473-3 Index:603-027-00-1	Acute Tox. 4, H302; STOT RE 2, H373	01-2119456816-28-xxxx
≥0.0015 - <0.005 %	2-octyl-2H-isothiazol-3-one	CAS:26530-20-1 EC:247-761-7 Index:613-112-00-5	Acute Tox. 2, H330 Acute Tox. 3, H311 Acute Tox. 3, H301 Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Corrosive to the respiratory tract., M-Chronic:100, M-Acute:100  Specific Concentration Limits: C ≥ 0,0015%: Skin Sens. 1A H317  Acute Toxicity Estimate: ATE - Oral: 125mg/kg bw ATE - Dermal: 311mg/kg bw	
<0.0015 %	free crystalline silica (Ø <10 µ)	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372	

## 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 of 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 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

Not available

### 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)

## 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

#### List of components with OEL value

Component	OEL Type	Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Behaviour	Note
ethylene glycol	National	SWEDEN		25	10	50	20		SWEDEN, Short-term value, 15 minutes average value
	National	FINLAND		50	20	100	40		FINLAND, hud
	National	NORWAY		52	20	104	40		NORWAY, H5
	National	SWEDEN		25	10	50	20		SWEDEN, Short-term value, 15 minutes average value
	EU	None		52	20	104	40		Skin
	National	NORWAY		10	10	20	20		
	ACGIH	None	C			100			(H), A4 - URT and eye irr
	National	NORWAY		26		52			
	DFG	GERMANY	C			52	20		
	ACGIH				25	10	50		A4 - Not Classifiable as a Human Carcinogen; upper respiratory tract irritation
	National	SWEDEN		25	10				
	National	FRANCE		52	20	104	40		
	National	SPAIN		52	20	104	40		
	National	GREECE		125	50	125	50		
	National	DENMARK		26	10				

2-octyl-2H-isothiazol-3-one	National	DENMARK		10	10				
	National	FINLAND		50	20	100	40		
	National	PORTUGAL		52	20	104	40		
	National	NORWAY		52	20	104	40		
	NDS	POLAND		15					
	NDSCh	POLAND				50			
	National	PORTUGAL	C			100			
	CHE	SWITZERLAND				52	20		
	NDS	NETHERLANDS		52		104			
	NDS	NETHERLANDS		10		104			
	National	GERMANY		26	10				
	National	CZECH REPUBLIC		50					
	National	HUNGARY		52		104			
	National	SLOVAKIA		52	20				
	National	SLOVENIA		52	20	104	40		
	National	UNITED KINGDOM		10	20	104	40		
	National	UNITED KINGDOM		10	20	30	40		
	Malaysi a OEL	MALAYSIA	C			100	39,4		
	National	ESTONIA		52	20	104	40		
	National	LATVIA		52	20	104	40		
	National	CZECH REPUBLIC	C			100			
	National	SLOVAKIA	C			104			
	National	CROATIA		52	20	104	40		
	EU			52	20	104	40	Indicative	Possibility of significant uptake through the skin
	National	UNITED KINGDOM		52	20	104	40		
	National	BULGARIA		52	20	104	40		
	National	ROMANIA		52	20	104	40		
	TUR	TURKEY		52	20	104	40		
	National	LITHUANIA		25	10	50	20		
	DFG	GERMANY	C			54	10		
free crystalline silica (Ø <10 µ)	National	GERMANY		0,05					
	CHE	SWITZERLAND				0,1			
	National	SLOVENIA		0,05		0,05			
	DFG	GERMANY	C			0,1			
	National	SLOVENIA		0,05		0,1			
	National	SWEDEN		0,100					SWEDEN, respirable aerosol
	National	NORWAY		0,100					K: Chemicals to be treated as carcinogenic.
	NDS	POLAND		2,000					frakcja wdychalna
	NDS	POLAND		0,300					frakcja respirabilna
	National	DENMARK		0,3		0,600			DENMARK, inhalable aerosol inhalable aerosol
	National	DENMARK		0,100		0,200			DENMARK, respirable aerosol respirable aerosol
	ACGIH	None		0,025					(R), A2 - Pulm fibrosis, lung

EU	None	0,025			cancer
National AUSTRIA		0,150			A2 (R) - Pulm fibrosis, lung cancer
ACGIH		0,025			A*
					A2 - Suspected Human Carcinogen;lung cancer;pulmonary fibrosis
National SWEDEN		0,1			
National FRANCE		0,1			
National SPAIN		0,05			
National DENMARK		0,3			
National DENMARK		0,1			
National FINLAND		0,05			
National PORTUGAL		0,025			
National NORWAY		0,3		0,9	
National NORWAY		0,1		0,9	
National BELGIUM		0,1			
NDS POLAND		0,1			
NDS NETHERLANDS		0,075			
National CZECH REPUBLIC		0,1			
National HUNGARY		0,15			
Malaysi a OEL	MALAYSIA	0,1			0.1 mg/m3 TWA (respirable dust)
National ESTONIA		0,1			
National SLOVAKIA		0,1		0,5	
National SLOVENIA		0,1			
National BULGARIA		0,07			
National ROMANIA		0,1			
National LITHUANIA		0,1			
National CROATIA		0,1			
National ITALY		0,100			

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

Component	CAS-No.	PNEC Limit	Exposure Route	Exposure Frequency	Remark
ethylene glycol	107-21-1	10 mg/l	Fresh Water		
		1 mg/l	Marine water		
		1,53 mg/kg	Soil		
		37 mg/kg	Freshwater sediments		
		10 mg/l	Intermittent release		
		199,5 mg/l	Microorganisms in sewage treatments		
		3,7 mg/kg	Marine water sediments		

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

Component	CAS-No.	Worker Industrial	Worker Professional	Consumer	Exposure Route	Exposure Frequency	Remark
ethylene glycol	107-21-1	106 mg/kg	53 mg/kg	53 mg/kg	Human Dermal	Long Term, systemic effects	
					Human Oral	Long Term, systemic effects	
			7 mg/m3		Human Inhalation	Long Term, local 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  $\geq 480\text{min}$ .

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: Dark brown

Odour: Odourless

Odour threshold:

Melting point / freezing point: Not available

Initial boiling point and boiling range: Not available

Flammability: Not available

Upper/lower flammability or explosive limits: Not available

Flash point: Not available

Auto-ignition temperature: Not available

Decomposition temperature: Not available

pH: 10.00

Viscosity: 20,000.00 cPs

Kinematic viscosity: Not available

Solubility in water: dispersible

Solubility in oil: Not available

Partition coefficient (n-octanol/water): Not available

Vapour pressure: Not available

Relative density: 1.00 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: ===

Solid/gas flammability: ==

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 mixture:

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	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:

ethylene glycol	a) acute toxicity	LC50 Inhalation Rat > 2,50000 mg/l 6h LD50 Skin Rat > 3500,00000 mg/kg
2-octyl-2H-isothiazol-3-one	a) acute toxicity	ATE - Oral : 125 mg/kg bw  ATE - Dermal : 311 mg/kg bw LD50 Oral Rat = 318 mg/kg LD50 Skin Rabbit = 311 mg/kg LC50 Inhalation Dust Rat = 0,58 mg/l 4h
free crystalline silica (Ø <10 µ)	a) acute toxicity	LD50 Oral Rat = 500 mg/kg

#### 11.2 Information on other hazards

##### Endocrine disrupting properties:

No endocrine disruptor substances present in concentration  
>= 0.1%

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### 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
ethylene glycol	CAS: 107-21-1 - EINECS: 203-473-3 - INDEX: 603-027-00-1	a) Aquatic acute toxicity : EC50 Daphnia > 100 mg/L 48  a) Aquatic acute toxicity : EC50 Algae > 100 mg/L 96 a) Aquatic acute toxicity : LC50 Fish > 100 mg/L 96 b) Aquatic chronic toxicity : NOEC Fish > 100 mg/L - 7 d b) Aquatic chronic toxicity : NOEC Daphnia > 100 mg/L - 7 d b) Aquatic chronic toxicity : NOEC Algae > 100 mg/L 72 a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss = 41000 mg/L 96 IUCLID a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss 14 mL/L 96h EP a) Aquatic acute toxicity : LC50 Fish Lepomis macrochirus = 27540 mg/L 96 EPA a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss = 40761 mg/L 96 IUCLID a) Aquatic acute toxicity : LC50 Fish Pimephales promelas 40000 mg/L 96h EPA a) Aquatic acute toxicity : LC50 Fish Poecilia reticulata = 16000 mg/L 96h IUCLID a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 46300 mg/L 48 IUCLID a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata 6500 mg/L 96h IUCLID
2-octyl-2H-isothiazol-3-one	CAS: 26530-20-1 - EINECS: 247-761-7 - INDEX: 613-112-00-5	a) Aquatic acute toxicity : EC50 Daphnia = 0,42 mg/L 48  a) Aquatic acute toxicity : EC50 Algae = 0,084 mg/L 72 a) Aquatic acute toxicity : LC50 Fish = 0,036 mg/L 96 a) Aquatic acute toxicity : LC50 Fish = 0,18 mg/L 96 b) Aquatic chronic toxicity : NOEC Daphnia = 0,002 mg/L - 21 d b) Aquatic chronic toxicity : NOEC Fish = 0,022 mg/L - 28 d b) Aquatic chronic toxicity : NOEC Algae = 0,004 mg/L 72

#### 12.2. Persistence and degradability

Not available

#### 12.3. Bioaccumulative potential

Not available

#### 12.4. Mobility in soil

Not available

#### 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) :

Not Applicable

Air (IATA) :

Not Applicable

Sea (IMDG) :

Not Applicable

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

Not Applicable

Bitumen based product. When transported at elevated temperature, the product must be considered dangerous for all modes of transport.

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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)

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

Not available

**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: 75

**SVHC Substances:**

No data available

**German Water Hazard Class (WGK)**

1

**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
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.

Code	Hazard class and hazard category	Description
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.4.2/1A	Skin Sens. 1A	Skin Sensitisation, Category 1A
3.9/1	STOT RE 1	Specific target organ toxicity — repeated exposure, Category 1
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2

**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
3.4.2/1A	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  
 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.**