

according to Regulation (EC) No 1907/2006 (REACH) as amended

BOLZTHERM AW-58

Creation date 19th November 2022

Revision date Version 1.0

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

L.1. Product identifier BOLZTHERM AW-58

Substance / mixture substance
Chemical name Benzyltoluene
CAS number 27776-01-8
EC (EINECS) number 248-654-8

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

Substance's intended use

Heat transferring fluid. Industrial uses. Commercial uses. **The use descriptors**

PC 16 Heat transfer fluids

Substance uses advised against

The product should not be used in ways other than those referred in Section 1. Do not use for private purposes.

1.3. Details of the supplier of the safety data sheet

Supplier

Name or trade name BOLZTHERM GmbH

Address Opelstraße 12, Gronau, 48599

Germany

Phone +49 (0) 2562 93 52 923
E-mail info@bolztherm.com
Web address https://bolztherm.com

Competent person responsible for the safety data sheet

Name BOLZTHERM GmbH E-mail info@bolztherm.com

1.4. Emergency telephone number

GGIZ +49-361-730730; 24 h, Monday - Sunday

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification of the substance in accordance with Regulation (EC) No 1272/2008

The substance is classified as dangerous.

Asp. Tox. 1, H304 Skin Irrit. 2, H315 Repr. 1B, H360FD Aquatic Chronic 1, H410

Most serious adverse effects on human health and the environment

May be fatal if swallowed and enters airways. Causes skin irritation. May damage fertility. May damage the unborn child. Very toxic to aquatic life with long lasting effects.



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2.2. Label elements

Hazard pictogram







Signal word

Danger

Dangerous substance

Benzyltoluene

(EC: 248-654-8; CAS: 27776-01-8) Dibenzylbenzene, ar-methyl derivative (EC: 258-649-2; CAS: 53585-53-8)

Hazard statements

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H360FD May damage fertility. May damage the unborn child. H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P201 Obtain special instructions before use.
P273 Avoid release to the environment.

P280 Wear protective gloves.

P301+P310 IF SWALLOWED: Immediately call a doctor.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P331 Do NOT induce vomiting.

P391 Collect spillage.

2.3. Other hazards

The substance does not have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended. Does not contain any PMT or vPvM components.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical characterization

The substance specified below.

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note			
	substance main component						
CAS: 27776-01-8 EC: 248-654-8	Benzyltoluene	>95	Asp. Tox. 1, H304 Skin Irrit. 2, H315 Repr. 1B, H360FD Aquatic Chronic 1, H410 (M=1)				
CAS: 53585-53-8 EC: 258-649-2	Dibenzylbenzene, ar-methyl derivative	<1	Asp. Tox. 1, H304 Repr. 1B, H360FD Aquatic Chronic 1, H410 (M=10)				

Full text of all classifications and hazard statements is given in the section 16.

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SECTION 4: First aid measures

4.1. Description of first aid measures

Do not perform artificial respiration without self-protection (e.g. a mask). Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

If inhaled

Terminate the exposure immediately; move the affected person to fresh air. Take care of your own safety, do not let the affected person walk! Beware of the contaminated clothes. Depending on the situation, call the medical rescue service and ensure medical treatment considering the frequent need of further observation for at least 24 hours.

If on skin

Take off contaminated clothing. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should continue at least for 10 minutes. Provide medical treatment, specialized if possible.

If swallowed

Rinse the mouth. No vomiting. To consult a doctor immediately.

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

If inhaled

Cough, headache.

If on skin

Causes skin irritation.

If in eyes

Not expected.

If swallowed

Irritation, nausea.

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

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.



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5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale mist/vapours/spray. Prevent contact with skin and eyes.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water. Do not allow to enter drains.

6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not inhale mist/vapours/spray. Prevent contact with skin and eyes. Obtain special instructions before use. Wash hands and exposed parts of the body thoroughly after handling. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Avoid release to the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Store locked up.

Storage class

6.1C - Combustible toxic substances or substances with chronic effect

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL

Benzyltoluene					
Workers / consumers	Route of exposure	Value	Effect		
Workers	Dermal	0.5 mg/kg bw/day	Chronic effects systemic		
Workers	Inhalation	3.5 mg/m ³	Chronic effects systemic		
Consumers	Dermal	0.25 mg/kg bw/day	Chronic effects systemic		
Consumers	Inhalation	0.57 mg/m ³	Chronic effects systemic		
Workers	Oral	0.25 mg/kg bw/day	Chronic effects systemic		



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Dibenzylbenzene, ar-methyl derivative					
Workers / consumers	Route of exposure	Value	Effect		
Workers	Inhalation	0.259 mg/m ³	Chronic effects systemic		
Workers	Dermal	0.37 mg/kg bw/day	Chronic effects systemic		
Consumers	Inhalation	64 μg/m³	Chronic effects systemic		
Consumers	Dermal	0.185 μg/kg bw/24h	Chronic effects systemic		
Consumers	Oral	18.5 μg/kg/24h	Chronic effects systemic		

PNEC

Benzyltoluene				
Route of exposure	Value			
Microorganisms in sewage treatment	0.99 mg/l			
Sea sediments	331 mg/kg of dry substance			
Soil (agricultural)	1 mg/kg of dry substance of soil			
Food chain	11.1 mg/kg			

Dibenzylbenzene, ar-methyl derivative				
Route of exposure	Value			
Freshwater environment	0.014 μg/l			
Marine water	0.014 μg/l			
Freshwater sediment	0.05 mg/kg of dry substance			
Sea sediments	0.005 mg/kg of dry substance			
Soil (agricultural)	2 mg/kg of dry substance			
Microorganisms in sewage treatment	1000 mg/l			

8.2. Exposure controls

Take off contaminated clothing and wash before reuse. Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest. Wear cold insulating gloves and either face shield or eye protection.

Eye/face protection

EN166 - Personal Eye Protection Standard.

Skin protection

Certified protective gloves are to be worn (EN 374). When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.

Respiratory protection

Aerosol or fog formation: filter device (full mask or mouthpiece set) with filter: A2, A2/P2, Abek

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2. Collect spillage.



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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state liquid

Colour data not available

color intensity light
Odour specific

Melting point/freezing point <-40 °C (DIN ISO 3016)

Boiling point or initial boiling point and boiling range 278 °C

Flammability data not available Lower and upper explosion limit data not available

Flash point 135 °C

Auto-ignition temperature 510 °C (DIN 51794)
Decomposition temperature data not available
pH data not available
Kinematic viscosity 2.78 mm²/s at 40 °C

Solubility in water insoluble
Partition coefficient n-octanol/water (log value)
4.3

Vapour pressure <1 kPa at 20 °C

Density and/or relative density

Density 996 kg/m³ at 20 °C Relative vapour density data not available Particle characteristics data not available

9.2. Other information

not available

SECTION 10: Stability and reactivity

10.1. Reactivity

This material is non-reactive under normal environmental conditions.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

SECTION 11: Toxicological information

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

No toxicological data is available for the substance.



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Acute toxicity

Based on available data the classification criteria are not met.

Benzyltoluene						
Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex
Oral	LD50		>2000 mg/kg		Rat (Rattus norvegicus)	
Dermal	LD50		>2000 mg/kg		Rabbit	

Dibenzylbenzene, ar-methyl derivative						
Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex
Oral	LD50	OECD 401	>5000 mg/kg		Rat (Rattus norvegicus)	
Dermal	LD50	OECD 402	>2000 mg/kg		Rabbit	

Skin corrosion/irritation

Causes skin irritation.

Benzyltoluene					
Route of exposure	Result	Method	Exposure time	Species	
	Skin burns	OECD 404		Rabbit	

Serious eye damage/irritation

Based on available data the classification criteria are not met.

Benzyltoluene					
Route of exposure	Result	Method	Exposure time	Species	
Eye	Slightly irritating	OECD 405		Rabbit	

Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

Benzyltoluene						
Route of exposure	Result	Method	Exposure time	Species	Sex	
	No effect	OECD 406		Guinea-pig (Cavia aperea f. porcellus)		

Germ cell mutagenicity

No data available for the substance. Based on available data the classification criteria are not met.

Carcinogenicity

No data available for the substance. Based on available data the classification criteria are not met.



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Reproductive toxicity

May damage fertility. May damage the unborn child.

Benzyltoluene						
Effect	Parameter	Method	Value	Result	Species	Sex
Effects on fertility	NOAEL Eltern		120 mg/kg	Effects on fertility	Rat (Rattus norvegicus)	
Effects on fertility	NOAEL F1		750 mg/kg bw	Effects on fertility	Rat	

Dibenzylbenzene, ar-methyl derivative							
Effect	Parameter	Method	Value	Result	Species	Sex	
Effects on fertility	NOAEL (P)	OECD 421	250 mg/kg bw/day		Rat (Rattus norvegicus)	F/M	
Effects on fertility	NOEL	OECD 421	250 mg/kg		Rat (Rattus norvegicus)	F/M	
Effects on fertility	NOAEL (F2)	OECD 421	80 mg/kg bw		Rat (Rattus norvegicus)	F/M	
Developmental toxicity	NOAEL	OECD 414	75 mg/kg		Rabbit	F BRO	
Developmental toxicity	LOAEL	OECD 414	10 mg/kg bw		Rabbit	F GRU	

Toxicity for specific target organ - single exposure

No data available for the substance. Based on available data the classification criteria are not met.

Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

Repeated dose toxicity

Benzyltoluene							
Route of exposure	Parameter	Result	Method	Value	Exposure time	Species	Sex
Oral	NOAEL		OECD 408	50 mg/kg		Rat (Rattus norvegicus)	

Dibenzylbenzene, ar-methyl derivative							
Route of exposure	Parameter	Result	Method	Value	Exposure time	Species	Sex
Oral	NOAEL	No effect	OECD 408	50 mg/kg	120 days	Rat (Rattus norvegicus)	
Oral	LOAEL	No effect	OECD 408	500 mg/kg	120 days	Rat (Rattus norvegicus)	

Aspiration hazard

May be fatal if swallowed and enters airways.



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11.2. Information on other hazards

Endocrine disrupting properties

Based on available data the classification criteria are not met. Does not contain any components that may cause endocrine disruption for humans.

Other information

not available

SECTION 12: Ecological information

12.1. Toxicity

Very toxic to aquatic life with long lasting effects.

Acute toxicity

Benzyltoluene							
Parameter	Method	Value	Exposure time	Species	Environmen t		
EC10	OECD 209	>990 mg/l	5 hours	Microorganisms			

Dibenzylbenzene, ar-methyl derivative							
Parameter	Method	Value	Exposure time	Species	Environmen t		
LC50		>0.05 mg/l	96 hours	Fish (Oncorhynchus mykiss)	B R (
EC50		>0.016 mg/l	72 hours	Algae (Selenastrum capricornutum)	GIVE		
LC50		>0.029 mg/l	48 hours	Daphnia (Daphnia magna)			
NOEC	att	0.0055 mg/l	32 days	Fish (Oncorhynchus mykiss)			
NOEC		0.0014 mg/l	21 days	Daphnia (Daphnia magna)			

12.2. Persistence and degradability

No data available for the substance.

Biodegradability

Benzyltoluene							
Parameter	Value	Exposure time	Environment	Result			
	60 %	28 days		Biodegradable			

Dibenzylbenzene, ar-methyl derivative						
Parameter Value		Exposure time	Environment	Result		
				Hardly biodegradable		

12.3. Bioaccumulative potential

No data available for the substance.

12.4. Mobility in soil

Based on available data the classification criteria are not met. Does not contain any PMT or vPvM components.

12.5. Results of PBT and vPvB assessment



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Based on available data the classification criteria are not met. Does not contain any PBT or vPvB components.

12.6. Endocrine disrupting properties

Based on available data the classification criteria are not met. Does not contain any components that may cause endocrine disruption in the environment.

12.7. Other adverse effects

Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Waste management legislation

Law on the placing on the market, return and high-quality recycling of packaging (Packaging Act - VerpackG) of June 9th, 2021, valid from January 1st, 2022. Ordinance on the European List of Waste (German Waste Catalogue Ordinance -Verordnung über das Europäische Abfallverzeichnis - AVV). Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

SECTION 14: Transport information

14.1. UN number or ID number

UN 3082

14.2. UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyltoluole)

14.3. Transport hazard class(es)

9 Miscellaneous dangerous substances and articles

14.4. Packing group

III

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Maritime transport in bulk according to IMO instruments

not relevant

Additional information

Hazard identification No.

UN number

Classification code

Safety signs

90 3082

Μ6

9+hazardous for the environment





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Road transport - ADR

Special provisions 274, 335, 375, 601

Limited quantities 5 L Excepted quantities E1

Packaging

Packing instructions P001, IBC03, LP01, R001

Special packing provisions PP1
Mixed packing provisions MP19

Portable tanks and bulk containers

Guidelines T4

Special provisions TP1, TP29

ADR tank

Tank code LGBV Vehicles for tank carriage AT Transport category 3 Tunnel restriction code (-)

Special provision for

packages V12 loading, unloading and handling CV13

Railway transport - RID

Special provisions 274, 335, 375, 601

Packaging

Packing instructions P001, IBC03, LP01, R001

Special packing provisions PP1
Mixed packing provisions MP19

Portable tanks and bulk containers

Guidelines T4

Special provisions TP1, TP29

RID Tanks

Tank code LGBV Transport category 3

Special provision for

packages W12 loading, unloading and handling CW13

Air transport - ICAO/IATA

Packaging instructions for limited amount Y964
Packaging instructions passenger 964
Cargo packaging instructions 964

Marine transport - IMDG

EmS (emergency plan) F-A, S-F

SECTION 15: Regulatory information

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

Prevention Act. Ordinance on facilities for handling substances hazardous to water (AwSV) of April 18, 2017. Law on the protection of working young people (Youth Employment Protection Act - JArbSchG). Ordinance on protection against hazardous substances (Hazardous Substances Ordinance - GefStoffV). Technical instructions for keeping the air clean. Law on protection against hazardous substances (Chemicals Act - ChemG). Ordinance on protecting the climate from changes caused by the release of certain fluorinated greenhouse gases



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(Chemicals Climate Protection Ordinance - ChemKlimaschutzV). Law on the implementation of occupational health and safety measures to improve the safety and health protection of employees at work. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No 1272/2008 of the European Parliament and of the Council, as amended. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Relevant provisions of the European Union (EU) Restrictions according to REACH, Annex XVII

Name: Dibenzylbenzene, ar-methyl derivative

"Name according to the list: this product meets the criteria for classification

according to Regulation No 1272/2008/

EC"

Restriction: R3

R3:

- 1. Must not be used
- in decorative items intended to create light or colour effects (through phase change), e.g. in mood lamps and ashtrays;
- in joke games;
- in games for one or more participants or in products intended to be used as such, including for decoration.
- 2. Products which do not comply with the requirements of paragraph 1 shall not be placed on the market.
- 3. Shall not be placed on the market if they contain a colouring agent, except for tax reasons, and/or a perfume, provided that
- they can be used as fuel in decorative oil lamps intended for supply to the general public, and
- their aspiration is classified as hazardous and they are labelled with H304.
- 4. Decorative oil lamps intended for supply to the general public shall not be placed on the market unless they comply with the European standard for decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
- 5. Without prejudice to the implementation of other Union provisions on the classification, labelling and packaging of substances and mixtures, suppliers shall ensure before the placing on the market that the following requirements are met:
- (a) lamp oils labelled with H304 and intended for supply to the general public shall bear the following visibly, legibly and indelibly labelled: 'Keep lamps filled with this liquid out of the reach of children'; and from 1 December 2010: 'Even a small sip of lamp oil or even just sucking on a lamp wick can cause life-threatening lung damage';
- (b) grill lighter liquids labelled with H304 and intended for supply to the general public shall bear the following visibly, legibly and indelibly labelled: 'Even a small sip of grill lighter liquid can cause life-threatening lung damage';
- (c) Lamp oils and barbecue lighters marked with H304 and intended for supply to the general public shall be packaged in black opaque containers with a maximum capacity of 1 litre from 1 December 2010.

REACH - List of substances of very high concern for authorisation (Article 59): Not applicable

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast): Not applicable



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Regulation (EC) No. 649/2012 of the European Parliament and of the Council concerning the export and import of dangerous chemicals: Not applicable

REACH - List of substances subject to authorisation (Annex XIV): Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances: E1 ENVIRONMENTAL HAZARDS

TA Luft

5.2.1: Total dust: Not applicable

5.2.2: Dusty inorganic substances:

Not applicable

5.2.4: Gaseous inorganic substances:

Not applicable

5.2.5: Organic substances:

Not applicable

5.2.7.1.1: Carcinogenic substances:

Not applicable

5.2.7.1.1: Respirable quartz dust PM4:

Not applicable

5.2.7.1.1: Formaldehyde:

Not applicable

5.2.7.1.2: Germ cell mutagenic substances:

Not applicable

5.2.7.1.3: Reproductive toxic substances:

Other: 1 % Section 5.2.7.1

Other: 100 % benzyl toluene, Dibenzylbenzene, ar-methyl derivative

5.2.7.2: Severe degradable, easily accumulated and highly toxic organic substances:

Not applicable

Volatile organic compounds: Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control): Not applicable

Other

Observe employment restrictions under the law on the protection of mothers at work, in training and during studies (Maternity Protection Act - MuSchG).

Observe employment restrictions under Directive 94/33/EC on the protection of young people at work or stricter national provisions, where applicable.

The components of this product are listed on the following inventories:

TCSI: On the list or in compliance

TSCA: All substances are listed as active on the TSCA inventory

AICS: On the list or in compliance

DSL: All components of this product are on the Canadian

DSL list

ENCS: On the list or in compliance ISHL: On the list or in compliance KECI: On the list or in compliance PICCS: On the list or in compliance IECSC: On the list or in compliance



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National regulations (Germany)

WGK Water hazard class: WGK 3 - highly hazardous to water

15.2. Chemical safety assessment

A chemical safety assessment has been carried out for this substance by the supplier.

More information

Other

Observe employment restrictions under the law on the protection of mothers at work, in training and during studies (Maternity Protection Act - MuSchG).

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The components of this product are listed on the following inventories:

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TSCA: All substances are listed as active on the TSCA inventory

AICS: On the list or in compliance

DSL: All components of this product are on the Canadian

DSL list

ENCS: On the list or in compliance ISHL: On the list or in compliance KECI: On the list or in compliance PICCS: On the list or in compliance IECSC: On the list or in compliance

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H360FD May damage fertility. May damage the unborn child. H410 Very toxic to aquatic life with long lasting effects.

Guidelines for safe handling used in the safety data sheet

P201 Obtain special instructions before use.
P273 Avoid release to the environment.

P280 Wear protective gloves.

P301+P310 IF SWALLOWED: Immediately call a doctor.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P331 Do NOT induce vomiting.

P391 Collect spillage.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR European agreement concerning the international carriage of dangerous goods

by road

AGW Occupational Exposure Limits

Aquatic Chronic Hazardous to the aquatic environment (chronic)

Asp. Tox. Aspiration hazard
BCF Bioconcentration Factor
CAS Chemical Abstracts Service



according to Regulation (EC) No 1907/2006 (REACH) as amended

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CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging of

substance and mixtures

EC Identification code for each substance listed in EINECS

EC10 Concentration of a substance when it is affected 10 % of the population EC50 Concentration of a substance when it is affected 50 % of the population **EINECS** European Inventory of Existing Commercial Chemical Substances

EmS Emergency plan FII **European Union**

EuPCS European Product Categorisation System IATA International Air Transport Association

IBC International Code For The Construction And Equipment of Ships Carrying

Dangerous Chemicals

ICAO International Civil Aviation Organization **IMDG International Maritime Dangerous Goods** IMO **International Maritime Organization**

International Nomenclature of Cosmetic Ingredients INCI ISO International Organization for Standardization TUPAC International Union of Pure and Applied Chemistry

LC50 Lethal concentration of a substance in which it can be expected death of 50% of

the population

Lethal dose of a substance in which it can be expected death of 50% of the LD50

population

LOAEL Lowest observed adverse effect level Octanol-water partition coefficient log Kow MAK Maximum workplace concentration NOAEL No observed adverse effect level NOEC No observed effect concentration

No observed effect level NOEL **OEL** Occupational Exposure Limits PBT Persistent, bioaccumulative and toxic

PMT Persistent, mobile and toxic

Parts per million ppm

Registration, Evaluation, Authorisation and Restriction of Chemicals REACH

Repr. Reproductive toxicity

RID Agreement on the transport of dangerous goods by rail

Skin Irrit. Skin irritation

UN Four-figure identification number of the substance or article taken from the UN

Model Regulations

UVCB Substances of unknown or variable composition, complex reaction products or

biological materials

VOC Volatile organic compounds

vPvB Very persistent and very bioaccumulative

vPvM Very persistent and very mobile

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet



according to Regulation (EC) No 1907/2006 (REACH) as amended

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Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

More information

Classification procedure - calculation method.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.



) UHLEN BROCK