Cupric Sulfate Pentahydrate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 11/05/2015 Revision date: 06/11/2018 Supersedes: 11/16/2017 Version: 3.0

SECTION 1: Identification

1.1. Identification

Product form : Substance

Substance name : Cupric Sulfate Pentahydrate

CAS-No. : 7758-99-8

Formula : $CuSO_4 \bullet 5H_2O$

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Nutrient; Dietary Supplement

1.3. Supplier

Manufacturer
Jost Chemical Co.
8150 Lackland Rd.
Saint Louis, Missouri 63114
T 314-428-4300 - F 314-428-4366
sds@jostchemical.com - www.jostchemical.com

Imported by:

Hawkins Watts Australia
Suite 8, 2 Compark Circuit
Mulgrave, Victoria 3170
Australia
P +61 3 9561 3710

Emergency:

Australia Poisons Centre
ph 13 11 26

Hawkins Watts New Zealand
43 Maurice Road, Penrose
PO Box 12-347, Penrose
Auckland 1642, New Zealand
P +64 9 622 2720

NZ National Poisons Centre
ph 0800 POISON (0800 764 766)

1.4. Emergency telephone number

Emergency number : For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
United States and Canada: 1-800-424-9300 / +1 703-527-3887
Global: +1 703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2	H319	Causes serious eye irritation
Hazardous to the aquatic environment - Acute Hazard Category 1	H400	Very toxic to aquatic life
Hazardous to the aquatic environment - Chronic Hazard Category 1	H410	Very toxic to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H302 - Harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) : P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell
P302+P352 - If on skin: Wash with plenty of water

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P321 - Specific treatment (see supplemental first aid instruction on this label)
P330 - Rinse mouth.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P391 - Collect spillage.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	GHS-US classification
Cupric Sulfate Pentahydrate (Main constituent)	(CAS-No.) 7758-99-8	100	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center/doctor/physician if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms : Harmful if swallowed.

Symptoms/effects after inhalation : AFTER INHALATION OF DUST: Dry/sore throat. Coughing. ON HEATING: Metal fume fever.

Symptoms/effects after skin contact : Irritation.

Symptoms/effects after eye contact : Eye irritation.

Symptoms/effects after ingestion : Metal taste. Irritation of the oral mucous membranes. Nausea. Vomiting. Headache. Dizziness. Feeling of weakness. AFTER INGESTION OF HIGH QUANTITIES: Abdominal pain. Diarrhoea. Change in the hemogramme/blood composition. Change in urine composition. Disturbances of consciousness.

Chronic symptoms : Red skin. Itching. Skin rash/inflammation. Feeling of weakness. Loss of weight. Coughing. Possible inflammation of the respiratory tract. Risk of pneumonia. Enlargement/affection of the liver.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

Unsuitable extinguishing media : No unsuitable extinguishing media known.

5.2. Specific hazards arising from the chemical

Fire hazard	:	DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	:	No data available on direct explosion hazard. No data available on indirect explosion hazard.
Reactivity	:	Reacts on exposure to water (moisture) with (some) metals. On burning: release of toxic and corrosive gases/vapors (sulphur oxides) and formation of metallic fumes. Reacts exothermically with (some) compounds: (increased) risk of fire. Reacts violently with (strong) reducers.

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire	:	Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighborhood close doors and windows.
Firefighting instructions	:	Dilute toxic gases with water spray. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.
Protection during firefighting	:	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	:	Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit. See "Material-Handling" to select protective clothing.
Emergency procedures	:	Ventilate spillage area. Avoid contact with skin and eyes.
Measures in case of dust release	:	In case of dust production: keep upwind. Dust production: have neighborhood close doors and windows.

6.1.2. For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	:	Avoid contact with skin and eyes.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	:	Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Collect spillage.
Methods for cleaning up	:	Mechanically recover the product.
Other information	:	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures	:	Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
Storage conditions	:	Store in a well-ventilated place. Keep cool.
Incompatible products	:	Acetylene. Magnesium.
Heat-ignition	:	heat sources.
Information on mixed storage	:	reducing agents. (strong) bases. water/moisture.
Storage area	:	Store in a dry area. Keep container in a well-ventilated place. Meet the legal requirements. Keep out of direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Dust production: dust mask with filter type P3. Protective clothing. Protective goggles. Gloves.

Materials for protective clothing:

Wear suitable protective clothing, gloves and eye/face protection

Hand protection:

Impermeable protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing

Respiratory protection:

Dust production: dust mask with filter type P2. Dust production: dust mask with filter type P3

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Blue crystals, Blue powder.
Color	:	Blue
Odor	:	Odorless
Odor threshold	:	No data available
pH	:	4 (3.2 %)
Melting point	:	110 °C
Freezing point	:	Not applicable
Boiling point	:	Not applicable
Flash point	:	Not applicable
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Non flammable.
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	2.3
Specific gravity / density	:	2286 kg/m³
Molecular mass	:	249.69 g/mol

Solubility	:	Soluble in water. Soluble in methanol. Soluble in glycerol. Water: 23 g/100ml Ethanol: 16 g/100ml (18 °C)
Log Pow	:	No data available
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	> 110 °C
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosion limits	:	Not applicable
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2. Other information

VOC content	:	0 %
Other properties	:	Hygroscopic. Substance has acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts on exposure to water (moisture) with (some) metals. On burning: release of toxic and corrosive gases/vapors (sulphur oxides) and formation of metallic fumes. Reacts exothermically with (some) compounds: (increased) risk of fire. Reacts violently with (strong) reducers.

10.2. Chemical stability

Hygroscopic.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Acetylene. Magnesium.

10.6. Hazardous decomposition products

Sulphur oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Oral: Harmful if swallowed.
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

Cupric Sulfate Pentahydrate (7758-99-8)	
LD50 oral rat	300 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 482 mg/kg bodyweight; Rat)
LD50 dermal rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Literature study; OECD 402: Acute Dermal Toxicity)
ATE US (oral)	500 mg/kg body weight

Skin corrosion/irritation	:	Causes skin irritation. pH: 4 (3.2 %)
Serious eye damage/irritation	:	Causes serious eye irritation. pH: 4 (3.2 %)
Respiratory or skin sensitization	:	Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	:	Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	:	Not classified (Lack of data)
Reproductive toxicity	:	Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity – single exposure	:	Not classified (Lack of data)
Specific target organ toxicity – repeated exposure	:	Not classified (Lack of data)

Aspiration hazard	:	Not classified (Based on available data, the classification criteria are not met)
Viscosity, kinematic	:	No data available
Likely routes of exposure	:	Ingestion.
Potential Adverse human health effects and symptoms	:	Harmful if swallowed.
Symptoms/effects after inhalation	:	AFTER INHALATION OF DUST: Dry/sore throat. Coughing. ON HEATING: Metal fume fever.
Symptoms/effects after skin contact	:	Irritation.
Symptoms/effects after eye contact	:	Eye irritation.
Symptoms/effects after ingestion	:	Metal taste. Irritation of the oral mucous membranes. Nausea. Vomiting. Headache. Dizziness. Feeling of weakness. AFTER INGESTION OF HIGH QUANTITIES: Abdominal pain. Diarrhoea. Change in the hemogramme/blood composition. Change in urine composition. Disturbances of consciousness.
Chronic symptoms	:	Red skin. Itching. Skin rash/inflammation. Feeling of weakness. Loss of weight. Coughing. Possible inflammation of the respiratory tract. Risk of pneumonia. Enlargement/affection of the liver.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	:	Dangerous for the environment. Very toxic to aquatic life with long lasting effects.
Ecology - air	:	Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.1.
Ecology - water	:	Groundwater pollutant. Maximum concentration in drinking water: 2.0 mg/l (copper) (Directive 98/83/EC); 250 mg/l (sulfate) (Directive 98/83/EC). Very toxic to fishes. Very toxic to invertebrates (Daphnia). Very toxic to algae. pH shift.

Cupric Sulfate Pentahydrate (7758-99-8)	
Threshold limit algae 2	0.368 mg/l (ErC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Read-across)

12.2. Persistence and degradability

Cupric Sulfate Pentahydrate (7758-99-8)	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

12.3. Bioaccumulative potential

Cupric Sulfate Pentahydrate (7758-99-8)	
BCF fish 1	13 mg/kg (Cyprinus carpio)
Bioaccumulative potential	Bioaccumable.

12.4. Mobility in soil

Cupric Sulfate Pentahydrate (7758-99-8)	
Ecology - soil	Toxic to flora.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	:	Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations	:	Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Precipitate/make insoluble. Remove to an authorized dump (Class I). Do not discharge into the sewer.
Additional information	:	LWCA (the Netherlands): KGA category 05. Hazardous waste according to Directive 2008/98/EC.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description	:	RQ, UN3077 Environmentally hazardous substances, solid, n.o.s. (Cupric Sulfate), 9, III
UN-No.(DOT)	:	UN3077
Proper Shipping Name (DOT)	:	Environmentally hazardous substances, solid, n.o.s.
Class (DOT)	:	9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140
Packing group (DOT)	:	III - Minor Danger
Hazard labels (DOT)	:	9 - Class 9 (Miscellaneous dangerous materials)

Dangerous for the environment	:	Yes
Marine pollutant	:	Yes

DOT Packaging Non Bulk (49 CFR 173.xxx)	:	213
DOT Packaging Bulk (49 CFR 173.xxx)	:	240
DOT Symbols	:	G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102)	:	8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description “Other regulated substances, liquid or solid, n.o.s.”, as appropriate. In addition, for solid materials, special provision B54 applies. 146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination. 335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as “Environmentally hazardous substances, solid, n.o.s,” UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging. A112 - Notwithstanding the quantity limits shown in Column (9A) and (9B) for this entry, the following IBCs are authorized for transportation aboard passenger and cargo-only aircraft. Each IBC may not exceed a maximum net quantity of 1,000 kg: a. Metal: 11A, 11B, 11N, 21A, 21B and 21N b. Rigid plastics: 11H1, 11H2, 21H1 and 21H2 c. Composite with plastic inner receptacle: 11HZ1, 11HZ2, 21HZ1 and 21HZ2 d. Fiberboard: 11G e. Wooden: 11C, 11D and 11F (with inner liners) f. Flexible: 13H2, 13H3, 13H4, 13H5, 13L2, 13L3, 13L4, 13M1 and 13M2 (flexible IBCs must be sift-proof and water resistant or must be fitted with a sift-proof and water resistant liner). B54 - Open-top, sift-proof rail cars are also authorized. IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2). IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner. N20 - A 5M1 multi-wall paper bag is authorized if transported in a closed transport vehicle. T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2) TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	155
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	No limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	No limit
DOT Vessel Stowage Location	:	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.
Emergency Response Guide (ERG) Number	:	171
Other information	:	No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Transport document description (IMDG)	:	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cupric Sulfate), 9, III, MARINE POLLUTANT
UN-No. (IMDG)	:	3077
Proper Shipping Name (IMDG)	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Class (IMDG)	:	9 - Miscellaneous dangerous substances and articles
Packing group (IMDG)	:	III - substances presenting low danger
Limited quantities (IMDG)	:	5 kg
EmS-No. (1)	:	F-A
EmS-No. (2)	:	S-F

Marine pollutant : Yes

Air transport

Transport document description (IATA)	:	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cupric Sulfate), 9, III
UN-No. (IATA)	:	3077
Proper Shipping Name (IATA)	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Class (IATA)	:	9 - Miscellaneous Dangerous Goods
Packing group (IATA)	:	III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Cupric Sulfate Pentahydrate (7758-99-8)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Cupric Sulfate Pentahydrate	CAS-No. 7758-99-8	100%

15.2. International regulations

CANADA

Cupric Sulfate Pentahydrate (7758-99-8)
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

EU-Regulations
No additional information available

National regulations
No additional information available

NZ HSNO information:
Approval Number: HSR003126
HSNO Categories: 6.1D, 6.3A, 6.4A, 9.1A

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

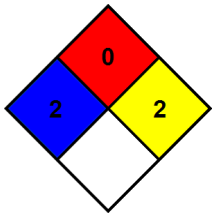
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 06/11/2018

Full text of H-phrases:

H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

NFPA health hazard	:	2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
NFPA fire hazard	:	0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA reactivity	:	2 - Materials that readily undergo violent chemical change at elevated temperatures and pressures.



Hazard Rating

Health	:	2 Moderate Hazard - Temporary or minor injury may occur
Flammability	:	0 Minimal Hazard - Materials that will not burn
Physical	:	1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

SDS US (HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product