HONEY KOTE ®

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4.2	11.04.2019	595572-00010	Date of first issue: 01.04.2016

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

1.1 Product identifier

Trade name : HONEY KOTE ®

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

Use of the Substance/Mixture	:	Industrial use, Thread Compound (Pipe Dope) and Jacking grease for use in Offshore industries, Mining, (without offshore industries)
Recommended restrictions on use	:	Do not use on oxygen lines or in oxygen enriched atmospheres.

1.3 Details of the supplier of the safety data sheet

Company	:	Bestolife Corporation 2777 N. Stemmons Frwy DALLAS, TX 75207,	INTERTEK FRANCE 27400 HEUDEBOUVILLE FRANCE
Telephone	:	855-243-9164/972-865-8961	+33 385 991270
Telefax	:	214-631-3047	+33 385 991288
E-mail address of person responsible for the SDS	:	www.bestolife.com/christian.gimenez@intertek.com/if.reach@intertek.com	

1.4 Emergency telephone number

CHEMTREC: +(44)-870-8200418; Interntnl: +1-703-527-3887 NHS Drct: +44 0845 4647 (Medical only)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Eye irritation, Category 2	H319: Causes serious eye irritation.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements : H319 Causes serious eye irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear eye protection/ face protection.

Response:

P337 + P313 If eye irritation persists: Get medical advice/ attention.
P391 Collect spillage.

2.3 Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Copper metal powder	7440-50-8 231-159-6 01-2119480154-42	Flam. Sol. 1; H228 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	>= 2.5 - < 10
Calcium oxide	1305-78-8 215-138-9 01-2119475325-36	Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335	>= 3 - < 10
Calcium hydroxide	1305-62-0 215-137-3	Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335	>= 1 - < 3
Acetic acid	64-19-7 200-580-7 607-002-00-6	Flam. Liq. 3; H226 Skin Corr. 1A; H314 Eye Dam. 1; H318	>= 1 - < 3
Quartz	14808-60-7 238-878-4	STOT RE 1; H372	>= 1 - < 10
Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulpho-nate)	Not Assigned 01-2119980985-16	Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 1 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact : In case of contact, immediately flush skin with plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

Risks : Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire- : Exposure to combustion products may be a hazard to health.

fighting

Hazardous combustion products	:	Carbon oxides Metal oxides Oxides of phosphorus Sulphur oxides Silicon oxides

5.3 Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

6.2 Environmental precautions

Environmental precautions	:	Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Sweep up or vacuum up spillage and collect in suitable container for disposal. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures	:	See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Advice on safe handling : Do not get on skin or clothing.
Do not swallow.
Do not get in eyes.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Take care to prevent spills, waste and minimize release to the environment.

Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in properly labelled containers. Store in accordance with the particular national regulations.

Advice on common storage : Do not store with the following product types:
Strong oxidizing agents

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Graphite	7782-42-5	TWA (inhalable dust)	10 mg/m3	GB EH40
Further information	For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the relevant limits			

	should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used			
		TWA (Respirable dust)	4 mg/m3	GB EH40
Further information	For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used			
Talc	14807-96-6	TWA (Respirable dust)	1 mg/m3	GB EH40
Further information	For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, Talc is defined as the mineral talc together with other hydrous phyllosilicates including chlorite and carbonate materials which occur with it, but excluding amphibole asbestos and crystalline silica., The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used			
Copper metal	7440-50-8	TWA (Fumes)	0.2 mg/m3	GB EH40

powder			(Copper)	
		TWA (Dusts and mists)	1 mg/m3 (Copper)	GB EH40
		STEL (Dusts and mists)	2 mg/m3 (Copper)	GB EH40
Calcium carbonate	471-34-1	TWA (inhalable dust)	10 mg/m3	GB EH40
Further information	For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used			
		TWA (Respirable dust)	4 mg/m3	GB EH40
Further information	For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used			
Calcium oxide	1305-78-8	TWA	2 mg/m3	GB EH40

Further information	Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used			
		TWA (Respirable fraction)	1 mg/m3	2017/164/EU
Further information	Indicative			
		STEL (Respirable fraction)	4 mg/m3	2017/164/EU
Further information	Indicative			
Calcium hydroxide	1305-62-0	TWA	5 mg/m3	GB EH40
Further information	Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used			
		TWA (Respirable fraction)	1 mg/m3	2017/164/EU
Further information	Indicative			
		STEL (Respirable fraction)	4 mg/m3	2017/164/EU
Further information	Indicative			
Acetic acid	64-19-7	TWA	10 ppm 25 mg/m3	2017/164/EU
Further information	Indicative			
		STEL	20 ppm 50 mg/m3	2017/164/EU
Further information	Indicative			
Quartz	14808-60-7	TWA (Respirable dust)	0.1 mg/m3 (Silica)	GB EH40
Further information	For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used			
		TWA (Respirable dust)	0.1 mg/m3	2004/37/EC
Further information	Carcinogens or mutagens			

These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

Quartz

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Graphite	Consumers	Inhalation	Long-term local effects	0.3 mg/m3
	Consumers	Ingestion	Long-term systemic effects	813 mg/kg bw/day
	Workers	Inhalation	Long-term local effects	1.2 mg/m3
Copper metal powder	Workers	Inhalation	Acute systemic effects	20 mg/m3
	Workers	Skin contact	Long-term systemic effects	137 mg/kg bw/day
	Workers	Skin contact	Acute systemic effects	237 mg/kg bw/day
	Consumers	Inhalation	Acute systemic effects	20 mg/m3
	Consumers	Inhalation	Long-term local effects	1 mg/m3
	Consumers	Inhalation	Acute local effects	1 mg/m3
	Consumers	Skin contact	Long-term systemic effects	137 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	273 mg/kg bw/day
Calcium carbonate	Workers	Inhalation	Long-term systemic effects	6.36 mg/m3
	Consumers	Ingestion	Acute systemic effects	6.1 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	1.06 mg/m3
	Consumers	Ingestion	Long-term systemic effects	6.1 mg/kg bw/day
Calcium oxide	Workers	Inhalation	Long-term local effects	1 mg/m3
	Workers	Inhalation	Acute local effects	4 mg/m3
	Consumers	Inhalation	Long-term local effects	1 mg/m3
	Consumers	Inhalation	Acute local effects	4 mg/m3
12-Hydroxystearic acid	Workers	Skin contact	Long-term systemic effects	250 mg/kg bw/day
	Consumers	Skin contact	Long-term systemic effects	125 mg/kg bw/day
Calcium hydroxide	Workers	Inhalation	Acute local effects	4 mg/m3
	Workers	Inhalation	Long-term local effects	1 mg/m3
	Consumers	Inhalation	Acute local effects	4 mg/m3
	Consumers	Inhalation	Long-term local effects	1 mg/m3
Acetic acid	Workers	Inhalation	Long-term local effects	25 mg/m3

	Workers	Inhalation	Acute local effects	25 mg/m3
	Consumers	Inhalation	Long-term local effects	25 mg/m3
	Consumers	Inhalation	Acute local effects	25 mg/m3
Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate)	Workers	Inhalation	Long-term systemic effects	2.23 mg/m3
	Workers	Skin contact	Long-term systemic effects	0.32 mg/kg bw/day
	Workers	Skin contact	Acute systemic effects	0.32 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0.55 mg/m3
	Consumers	Skin contact	Long-term systemic effects	0.16 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	0.16 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0.16 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	0.16 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Residual oils (petroleum), hydrotreated	Oral (Secondary Poisoning)	9.33 mg/kg food
Copper metal powder	Fresh water	7.8 µg/l
	Marine water	5.2 µg/l
	Sewage treatment plant	230 µg/l
	Fresh water sediment	87 mg/kg
	Marine sediment	676 mg/kg
	Soil	65 mg/kg
Calcium carbonate	Sewage treatment plant	100 mg/l
Distillates (petroleum), hydrotreated heavy paraffinic	Oral (Secondary Poisoning)	9.33 mg/kg food
Calcium oxide	Fresh water	0.37 mg/l
	Marine water	0.24 mg/l
	Intermittent use/release	0.37 mg/l
	Sewage treatment plant	2.27 mg/l
	Soil	817.4 mg/kg dry weight (d.w.)
Distillates (petroleum), hydrotreated light paraffinic	Oral (Secondary Poisoning)	9.33 mg/kg food
Distillates (petroleum), hydrotreated light naphthenic	Oral (Secondary Poisoning)	9.33 mg/kg food
12-Hydroxystearic acid	Fresh water	0.1 mg/l
	Intermittent use/release	1 mg/l
	Marine water	0.01 mg/l
	Sewage treatment plant	300 mg/l
Calcium hydroxide	Fresh water	0.49 mg/l
	Marine water	0.32 mg/l
	Intermittent use/release	0.49 mg/l

	Sewage treatment plant	3 mg/l
	Soil	1080 mg/kg dry weight (d.w.)
Acetic acid	Fresh water	3.058 mg/l
	Freshwater - intermittent	30.58 mg/l
	Marine water	0.3058 mg/l
	Sewage treatment plant	85 mg/l
	Fresh water sediment	11.36 mg/kg dry weight (d.w.)
	Marine sediment	1.136 mg/kg dry weight (d.w.)
	Soil	0.47 mg/kg dry weight (d.w.)
Calcium bis(di C8-C10, branched, C9 rich, alkylnaphtha-lenesulphonate)	Fresh water	0.27 µg/l
	Marine water	0.027 µg/l
	Intermittent use/release	2.7 µg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	4.69 mg/kg
	Marine sediment	0.469 mg/kg
	Soil	0.936 mg/kg
	Oral (Secondary Poisoning)	9.5 mg/kg food

8.2 Exposure controls

Engineering measures

Minimize workplace exposure concentrations.

Personal protective equipment

Eye protection : Wear the following personal protective equipment:
Safety goggles
Equipment should conform to BS EN 166

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Combined particulates and organic vapour type (A-P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	Viscous semi-solid
Colour	:	copper
Odour	:	Petroleum
Odour Threshold	:	No data available
pH	:	Not applicable (not an aqueous solution)
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	>= 200 °C Method: ASTM D 92, Cleveland open cup Distillates (petroleum), hydrotreated heavy naphthenic
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Not classified as a flammability hazard
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Relative density	:	1.3
Density	:	No data available
Solubility(ies)		
Water solubility	:	negligible
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	Not applicable
Flow time	:	No data available
Explosive properties	:	Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information

Molecular weight : No data available

Particle size : No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on likely routes of exposure : Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Components:

Copper metal powder:

Acute oral toxicity : LD50 (Rat): > 2,500 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 5.11 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Calcium oxide:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 425

Acute inhalation toxicity : (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 2,500 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Calcium hydroxide:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 425
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : (Rat): > 6.04 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 2,500 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Acetic acid:

Acute oral toxicity : LD50 (Rat): > 2,000 - 5,000 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: Based on data from similar materials

Quartz:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate):

Acute oral toxicity : LD50 (Rat): > 2,500 mg/kg
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: Based on data from similar materials

Skin corrosion/irritation

Not classified based on available information.

Components:

Copper metal powder:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Calcium oxide:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation
Remarks : Based on data from similar materials

Calcium hydroxide:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation
Remarks : Based on data from similar materials

Acetic acid:

Species : Rabbit
Result : Corrosive after 3 minutes or less of exposure

Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate):

Species : Rabbit
Result : Skin irritation
Remarks : Based on data from similar materials

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Result : Irritation to eyes, reversing within 21 days

Components:

Copper metal powder:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation

Calcium oxide:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Irreversible effects on the eye

Calcium hydroxide:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Irreversible effects on the eye

Acetic acid:

Species	:	Rabbit
Result	:	Irreversible effects on the eye

Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate):

Species	:	Rabbit
Result	:	Irritation to eyes, reversing within 21 days
Remarks	:	Based on data from similar materials

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Copper metal powder:

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative

Calcium oxide:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	negative
Remarks	:	Based on data from similar materials

Calcium hydroxide:

Test Type	:	Local lymph node assay (LLNA)

Exposure routes	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	negative
Remarks	:	Based on data from similar materials

Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate):

Test Type	:	Human repeat insult patch test (HRIPT)
Exposure routes	:	Skin contact
Result	:	negative

Germ cell mutagenicity

Not classified based on available information.

Components:

Copper metal powder:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative
Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Ingestion Method: Directive 67/548/EEC, Annex V, B.12. Result: negative Remarks: Based on data from similar materials

Calcium oxide:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative Remarks: Based on data from similar materials Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative Remarks: Based on data from similar materials

Calcium hydroxide:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473

Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Acetic acid:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: Chromosome aberration test in vitro
Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Result: equivocal
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (vapour)
Result: negative
Remarks: Based on data from similar materials

Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate):

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

Components:

Calcium oxide:

Species	:	Rat
Application Route	:	Ingestion
Exposure time	:	104 weeks
Result	:	negative
Remarks	:	Based on data from similar materials

Calcium hydroxide:

Species	:	Rat
Application Route	:	Ingestion
Exposure time	:	104 weeks
Result	:	negative

Remarks : Based on data from similar materials

Acetic acid:

Species : Mouse
Application Route : Skin contact
Exposure time : 32 weeks
Result : negative

Quartz:

Species : Humans
Application Route : inhalation (dust/mist/fume)
Result : positive
Remarks : IARC: (International Agency for Research on Cancer)
These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

Reproductive toxicity

Not classified based on available information.

Components:

Copper metal powder:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rabbit
Application Route: Ingestion
Result: negative

Calcium oxide:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

Calcium hydroxide:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test

Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Acetic acid:

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative

STOT - single exposure

Not classified based on available information.

Components:

Calcium oxide:

Assessment : May cause respiratory irritation.

Calcium hydroxide:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Components:

Quartz:

Exposure routes : inhalation (dust/mist/fume)
Target Organs : Lungs
Assessment : Shown to produce significant health effects in animals at concentrations of 0.02 mg/l/6h/d or less.

Repeated dose toxicity

Components:

Copper metal powder:

Species : Rat
NOAEL : >= 2 mg/m3
Application Route : inhalation (dust/mist/fume)
Exposure time : 28 Days

Calcium oxide:

Species	:	Rat
NOAEL	:	>= 0.399 mg/l
Application Route	:	inhalation (dust/mist/fume)
Exposure time	:	90 Days
Method	:	OECD Test Guideline 413

Calcium hydroxide:

Species	:	Mouse
NOAEL	:	>= 1,300 mg/kg
Application Route	:	Ingestion
Exposure time	:	28 Days
Remarks	:	Based on data from similar materials

Species	:	Rat
NOAEL	:	>= 0.107 mg/l
Application Route	:	inhalation (dust/mist/fume)
Exposure time	:	28 Days
Method	:	OECD Test Guideline 412

Acetic acid:

Species	:	Rat
NOAEL	:	290 mg/kg
Application Route	:	Ingestion
Exposure time	:	8 Weeks

Quartz:

Species	:	Humans
LOAEL	:	0.053 mg/m3
Application Route	:	inhalation (dust/mist/fume)
Remarks	:	These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

Aspiration toxicity

Not classified based on available information.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Copper metal powder:

Toxicity to fish	:	LC50 : > 10 - 100 µg/l Exposure time: 96 h
M-Factor (Acute aquatic toxicity)	:	10
Toxicity to fish (Chronic toxicity)	:	NOEC: > 1 - 10 µg/l
M-Factor (Chronic aquatic	:	10

toxicity)

Calcium oxide:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials EC10 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
Toxicity to microorganisms	:	EC50 : > 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: > 1 mg/l Exposure time: 14 d Species: Crangon crangon (shrimp) Remarks: Based on data from similar materials

Calcium hydroxide:

Toxicity to fish	:	LC50 (Gasterosteus aculeatus (threespine stickleback)): 457 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Crangon crangon (shrimp)): 158 mg/l Exposure time: 96 h
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 184.57 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 EC10 (Pseudokirchneriella subcapitata (green algae)): 79.22 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 : 300.4 mg/l

Exposure time: 3 h
Method: OECD Test Guideline 209

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 32 mg/l
Exposure time: 14 d

Acetic acid:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Skeletonema costatum (marine diatom)): > 100 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials

NOEC (Skeletonema costatum (marine diatom)): > 1 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC (Pseudomonas putida): 1,150 mg/l
Exposure time: 16 h

Toxicity to fish (Chronic toxicity) : NOEC: > 1 mg/l
Exposure time: 21 d
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 204

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 1 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

Quartz:

Ecotoxicology Assessment

Acute aquatic toxicity : No toxicity at the limit of solubility

Chronic aquatic toxicity : No toxicity at the limit of solubility

Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate):

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 100 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC10 : 110 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

12.2 Persistence and degradability

Components:

Acetic acid:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 96 %
Exposure time: 20 d

Calcium bis(di C8-C10, branched, C9 rich, alkylnaphthalenesulphonate):

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 16 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
Remarks: Based on data from similar materials

12.3 Bioaccumulative potential

Components:

Acetic acid:

Partition coefficient: n-octanol/water : log Pow: -0.17

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Not relevant

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
Empty containers retain residue and can be dangerous.

Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADN	:	UN 3077
ADR	:	UN 3077
RID	:	UN 3077
IMDG	:	UN 3077
IATA	:	UN 3077

14.2 UN proper shipping name

ADN	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper metal powder)
ADR	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper metal powder)
RID	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper metal powder)
IMDG	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper metal powder)
IATA	:	Environmentally hazardous substance, solid, n.o.s. (Copper metal powder)

14.3 Transport hazard class(es)

ADN	:	9
ADR	:	9
RID	:	9
IMDG	:	9
IATA	:	9

14.4 Packing group

ADN

Packing group	:	III
Classification Code	:	M7
Hazard Identification Number	:	90
Labels	:	9

ADR

Packing group	:	III

Classification Code	:	M7
Hazard Identification Number	:	90
Labels	:	9
Tunnel restriction code	:	(-)

RID

Packing group	:	III
Classification Code	:	M7
Hazard Identification Number	:	90
Labels	:	9

IMDG

Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft)	:	956
Packing instruction (LQ)	:	Y956
Packing group	:	III
Labels	:	Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft)	:	956
Packing instruction (LQ)	:	Y956
Packing group	:	III
Labels	:	Miscellaneous

14.5 Environmental hazards

ADN

Environmentally hazardous	:	yes

ADR

Environmentally hazardous	:	yes

RID

Environmentally hazardous	:	yes

IMDG

Marine pollutant	:	yes

IATA (Passenger)

Environmentally hazardous	:	yes

IATA (Cargo)

Environmentally hazardous	:	yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Transport in bulk according to IMO instruments

Remarks	:	Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EC) No 850/2004 on persistent organic pollutants	:	Not applicable
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	Not applicable
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	:	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.

		Quantity 1	Quantity 2
E1	ENVIRONMENTAL HAZARDS	100 t	200 t
34	Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)	2,500 t	25,000 t

The components of this product are reported in the following inventories:

AICS	:	All ingredients listed or exempt.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Other information	:	Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements

H226	:	Flammable liquid and vapour.
H228	:	Flammable solid.
H314	:	Causes severe skin burns and eye damage.
H315	:	Causes skin irritation.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H335	:	May cause respiratory irritation.
H372	:	Causes damage to organs through prolonged or repeated exposure if inhaled.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Flam. Sol.	:	Flammable solids
Skin Corr.	:	Skin corrosion
Skin Irrit.	:	Skin irritation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
2004/37/EC	:	Europe. Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
2017/164/EU	:	Commission Directive (EU) 2017/164 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
2004/37/EC / TWA	:	Long term exposure limit
2017/164/EU / STEL	:	Short term exposure limit
2017/164/EU / TWA	:	Limit Value - eight hours
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisa-

tion for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Sources of key data used to compile the Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

Classification of the mixture:		**Classification procedure:**
Eye Irrit. 2	H319	Based on product data or assessment
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 1	H410	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

GB / EN