



Safety Data Sheet according to Regulation (EC) No 1907/2006

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LOCTITE LB 8023 known as 8023, Marine Grade A.S.

SDS No. : 153630
V006.0

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Replaces version from: 09.08.2016

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

1.1. Product identifier

LOCTITE LB 8023 known as 8023, Marine Grade A.S.

Contains:

Calcium oxide
Calcium dihydroxide
(C16-C24)Alkylbenzenesulfonic acid, Ca
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts
Sulfonic acids, petroleum, calcium salts

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

Intended use:
Lubricant

1.3. Details of the supplier of the safety data sheet

Henkel Ltd
Wood Lane End
HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000
Fax-no.: +44 1442 278071

ua-productsafety.uk@henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Skin irritation	Category 2
H315 Causes skin irritation.	
Serious eye damage	Category 1
H318 Causes serious eye damage.	
Skin sensitizer	Category 1
H317 May cause an allergic skin reaction.	
Specific target organ toxicity - single exposure	Category 3
H335 May cause respiratory irritation.	
Target organ: respiratory tract irritation	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:**Signal word:**

Danger

Hazard statement:

H318 Causes serious eye damage.
 H335 May cause respiratory irritation.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.

**Precautionary statement:
Prevention**

P261 Avoid breathing vapours.
 P280 Wear protective gloves/eye protection.

**Precautionary statement:
Response**

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

2.3. Other hazards

None if used properly.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****General chemical description:**

Lubricant

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Calcium oxide 1305-78-8	215-138-9 01-2119475325-36	10- < 20 %	Skin Irrit. 2; Dermal H315 Eye Dam. 1 H318 STOT SE 3; Inhalation H335
Calcium dihydroxide 1305-62-0	215-137-3 01-2119475151-45	1- < 3 %	Skin Irrit. 2; Dermal H315 Eye Dam. 1 H318 STOT SE 3; Inhalation H335
(C16-C24)Alkylbenzenesulfonic acid, Ca 70024-69-0	274-263-7 01-2119492616-28	1- < 5 %	Skin Sens. 1B H317
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6	271-529-4 01-2119492627-25	1- < 5 %	Skin Sens. 1B H317
Sulfonic acids, petroleum, calcium salts 61789-86-4	263-093-9 01-2119488992-18	1- < 5 %	Skin Sens. 1 H317 Aquatic Chronic 4 H413
Boron oxide (B2O3) 1303-86-2	215-125-8 01-2119486655-24	0,1- < 0,3 %	Repr. 1B H360FD ===== EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC)

For full text of the H - statements and other abbreviations see section 16 "Other information".

Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation:**

Move to fresh air. If symptoms persist, seek medical advice.

Skin contact:

Rinse with running water and soap.
Seek medical advice.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.

Ingestion:

Rinse out mouth, drink 1-2 glasses of water, do not induce vomiting.
Seek medical advice.

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

SKIN: Redness, inflammation.

SKIN: Rash, Urticaria.

After eye contact: Corrosive, may cause permanent damage to eyes (impairment of vision).

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

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

See section: Description of first aid measures

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media:**

Carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:

None known

5.2. Special hazards arising from the substance or mixture

Oxides of carbon, oxides of nitrogen, irritating organic vapors.
Sulphur oxides

5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Additional information:

In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin and eyes.
Wear protective equipment.
Ensure adequate ventilation.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

For small spills wipe up with paper towel and place in container for disposal.

For large spills absorb onto inert absorbent material and place in sealed container for disposal.

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Use only in well-ventilated areas.

Avoid skin and eye contact.

Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.

See advice in section 8

Hygiene measures:

Good industrial hygiene practices should be observed.

Do not eat, drink or smoke while working.

Wash hands before work breaks and after finishing work.

7.2. Conditions for safe storage, including any incompatibilities

Refer to Technical Data Sheet

7.3. Specific end use(s)

Lubricant

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Calcium oxide 1305-78-8 [CALCIUM OXIDE]		2	Time Weighted Average (TWA):		EH40 WEL
Calcium oxide 1305-78-8 [CALCIUM OXIDE (RESPIRABLE FRACTION)]		1	Time Weighted Average (TWA):	Indicative	ECTLV
Calcium oxide 1305-78-8 [CALCIUM OXIDE (RESPIRABLE FRACTION)]		4	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Graphite 7782-42-5 [GRAPHITE, INHALABLE DUST]		10	Time Weighted Average (TWA):		EH40 WEL
Graphite 7782-42-5 [GRAPHITE, RESPIRABLE DUST]		4	Time Weighted Average (TWA):		EH40 WEL
Graphite 7782-42-5 [DUST, INHALABLE DUST]		10	Time Weighted Average (TWA):		EH40 WEL
Graphite 7782-42-5 [DUST, RESPIRABLE DUST]		4	Time Weighted Average (TWA):		EH40 WEL
Calcium dihydroxide 1305-62-0 [CALCIUM HYDROXIDE]		5	Time Weighted Average (TWA):		EH40 WEL
Calcium dihydroxide 1305-62-0 [CALCIUM DIHYDROXIDE (RESPIRABLE FRACTION)]		4	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Calcium dihydroxide 1305-62-0 [CALCIUM DIHYDROXIDE (RESPIRABLE FRACTION)]		1	Time Weighted Average (TWA):	Indicative	ECTLV
Diboron trioxide 1303-86-2 [DIBORON TRIOXIDE]		10	Time Weighted Average (TWA):		EH40 WEL
Diboron trioxide 1303-86-2 [DIBORON TRIOXIDE]		20	Short Term Exposure Limit (STEL):		EH40 WEL

Occupational Exposure Limits

Valid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Calcium oxide 1305-78-8 [CALCIUM OXIDE]		2	Time Weighted Average (TWA):		IR_OEL
Calcium oxide 1305-78-8 [CALCIUM OXIDE (RESPIRABLE FRACTION)]		1	Time Weighted Average (TWA):	Indicative	ECTLV
Calcium oxide 1305-78-8 [CALCIUM OXIDE (RESPIRABLE FRACTION)]		4	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Graphite 7782-42-5 [GRAPHITE, RESPIRABLE DUST]		4	Time Weighted Average (TWA):		IR_OEL

Graphite 7782-42-5 [GRAPHITE, TOTAL INHALABLE DUST]		10	Time Weighted Average (TWA):		IR_OEL
Graphite 7782-42-5 [DUSTS, NON-SPECIFIC, RESPIRABLE]		4	Time Weighted Average (TWA):		IR_OEL
Graphite 7782-42-5 [DUSTS, NON-SPECIFIC, TOTAL INHALABLE]		10	Time Weighted Average (TWA):		IR_OEL
Distillates (petroleum), solvent-refined heavy paraffinic 64741-88-4 [MINERAL OIL, PURE, HIGHLY & SEVERELY REFINED, INHALABLE FRACTION]		5	Time Weighted Average (TWA):		IR_OEL
Distillates (petroleum), hydrotreated light naphthenic < 3% DMSO 64742-53-6 [MINERAL OIL, PURE, HIGHLY & SEVERELY REFINED, INHALABLE FRACTION]		5	Time Weighted Average (TWA):		IR_OEL
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5 [MINERAL OIL, PURE, HIGHLY & SEVERELY REFINED, INHALABLE FRACTION]		5	Time Weighted Average (TWA):		IR_OEL
Calcium distearate 1592-23-0 [STEARATES (EXCEPT LEAD STEARATE)]		10	Time Weighted Average (TWA):		IR_OEL
Calcium dihydroxide 1305-62-0 [CALCIUM HYDROXIDE]		5	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
Calcium dihydroxide 1305-62-0 [CALCIUM DIHYDROXIDE (RESPIRABLE FRACTION)]		4	Short Term Exposure Limit (STEL):	Indicative	ECLTV
Calcium dihydroxide 1305-62-0 [CALCIUM DIHYDROXIDE (RESPIRABLE FRACTION)]		1	Time Weighted Average (TWA):	Indicative	ECLTV
Diboron trioxide 1303-86-2 [BORON OXIDE]		10	Time Weighted Average (TWA):		IR_OEL
Diboron trioxide 1303-86-2 [BORON OXIDE]		20	Short Term Exposure Limit (STEL):		IR_OEL

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Calcium oxide 1305-78-8	aqua (freshwater)		0,37 mg/l				
Calcium oxide 1305-78-8	aqua (marine water)		0,24 mg/l				
Calcium oxide 1305-78-8	aqua (intermittent releases)		0,37 mg/l				
Calcium oxide 1305-78-8	sewage treatment plant (STP)		2,27 mg/l				
Calcium oxide 1305-78-8	soil				817,4 mg/kg		
Calcium oxide 1305-78-8	sediment (freshwater)						
Calcium oxide 1305-78-8	sediment (marine water)						
Calcium oxide 1305-78-8	Air						
Calcium oxide 1305-78-8	Predator						
Calcium dihydroxide 1305-62-0	aqua (freshwater)		0,49 mg/l				
Calcium dihydroxide 1305-62-0	aqua (marine water)		0,32 mg/l				
Calcium dihydroxide 1305-62-0	aqua (intermittent releases)		0,49 mg/l				
Calcium dihydroxide 1305-62-0	sewage treatment plant (STP)		3 mg/l				
Calcium dihydroxide 1305-62-0	soil				1080 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Calcium dihydroxide 1305-62-0	Workers	Inhalation	Acute/short term exposure - local effects		4 mg/m ³	
Calcium dihydroxide 1305-62-0	Workers	Inhalation	Long term exposure - local effects		1 mg/m ³	
Calcium dihydroxide 1305-62-0	General population	Inhalation	Acute/short term exposure - local effects		4 mg/m ³	
Calcium dihydroxide 1305-62-0	General population	Inhalation	Long term exposure - local effects		1 mg/m ³	

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:
Ensure good ventilation/extraction.

Respiratory protection:

Ensure adequate ventilation.

An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area

Filter type: A (EN 14387)

Hand protection:

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):

nitrile rubber (NBR; >= 0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):

nitrile rubber (NBR; >= 0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Protective eye equipment should conform to EN166.

Skin protection:

Wear suitable protective clothing.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	paste black
Odor	mild
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	Not applicable
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Relative vapour density:	No data available / Not applicable
Density (ρ)	1,2648 g/cm ³
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative) (Solvent: Water)	Insoluble
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable

Oxidising properties

No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity**10.1. Reactivity**

Reaction with strong acids.

Reacts with strong oxidants.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

No decomposition if used according to specifications.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

carbon oxides.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute oral toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Calcium oxide 1305-78-8	LD50	> 2.000 mg/kg	rat	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
Calcium dihydroxide 1305-62-0	LD50	> 7.340 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
(C16- C24)Alkylbenzenesulfonic acid, Ca 70024-69-0	LD50	> 5.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6	LD50	> 5.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Sulfonic acids, petroleum, calcium salts 61789-86-4	LD50	> 5.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Boron oxide (B2O3) 1303-86-2	LD50	> 2.600 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Calcium oxide 1305-78-8	LD50	> 2.500 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
Calcium dihydroxide 1305-62-0	LD50	> 2.500 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
(C16- C24)Alkylbenzenesulfoni c acid, Ca 70024-69-0	LD50	> 5.000 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6	LD50	> 5.000 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
Sulfonic acids, petroleum, calcium salts 61789-86-4	LD50	> 5.000 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
Boron oxide (B2O3) 1303-86-2	LD50	> 2.000 mg/kg	rabbit	not specified

Acute inhalative toxicity:

No data available.

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Calcium dihydroxide 1305-62-0	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
(C16- C24)Alkylbenzenesulfoni c acid, Ca 70024-69-0	not irritating	4 h	rabbit	EPA OPPTS 870.2500 (Acute Dermal Irritation)
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6	not irritating	4 h	rabbit	EPA OPPTS 870.2500 (Acute Dermal Irritation)
Sulfonic acids, petroleum, calcium salts 61789-86-4	not irritating	4 h	rabbit	EPA OPPTS 870.2500 (Acute Dermal Irritation)
Boron oxide (B2O3) 1303-86-2	not irritating	24 h	rabbit	not specified

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Calcium oxide 1305-78-8	Category 1 (irreversible effects on the eye)		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Calcium dihydroxide 1305-62-0	Category 1 (irreversible effects on the eye)		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
(C16- C24)Alkylbenzenesulfoni c acid, Ca 70024-69-0	not irritating		rabbit	EPA OPPTS 870.2400 (Acute Eye Irritation)
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6	not irritating		rabbit	EPA OPPTS 870.2400 (Acute Eye Irritation)
Sulfonic acids, petroleum, calcium salts 61789-86-4	not irritating		rabbit	EPA OPPTS 870.2400 (Acute Eye Irritation)
Boron oxide (B2O3) 1303-86-2	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
(C16- C24)Alkylbenzenesulfoni c acid, Ca 70024-69-0	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Sulfonic acids, petroleum, calcium salts 61789-86-4	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Boron oxide (B2O3) 1303-86-2	not sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Calcium oxide 1305-78-8	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EPA OPPTS 870.5265 (The Salmonella typhimurium Bacterial Reverse Mutation Test)
Calcium oxide 1305-78-8	negative	mitotic recombination in Sacch. cerevisiae	with and without		OECD Guideline 481 (Genetic Toxicology: Saccharomyces cerevisiae, Mitotic Recombination Assay)
Calcium dihydroxide 1305-62-0	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
(C16- C24)Alkylbenzenesulfoni c acid, Ca 70024-69-0	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
(C16- C24)Alkylbenzenesulfoni c acid, Ca 70024-69-0	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
(C16- C24)Alkylbenzenesulfoni c acid, Ca 70024-69-0	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Sulfonic acids, petroleum, calcium salts 61789-86-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Sulfonic acids, petroleum, calcium salts 61789-86-4	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Sulfonic acids, petroleum, calcium salts 61789-86-4	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Boron oxide (B2O3) 1303-86-2	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified
Boron oxide (B2O3) 1303-86-2	negative	mammalian cell gene mutation assay	with and without		not specified
Boron oxide (B2O3) 1303-86-2	negative	sister chromatid exchange assay in mammalian cells	with and without		not specified
(C16- C24)Alkylbenzenesulfoni c acid, Ca 70024-69-0	negative	intraperitoneal		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6	negative	intraperitoneal		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Sulfonic acids, petroleum, calcium salts 61789-86-4	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Boron oxide (B2O3) 1303-86-2	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
Boron oxide (B2O3) 1303-86-2	not carcinogenic	oral: feed	103 w daily	mouse	male/female	OECD Guideline 451 (Carcinogenicity Studies)

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
Boron oxide (B2O3) 1303-86-2	NOAEL P 336 mg/kg NOAEL F1 100 mg/kg NOAEL F2 100 mg/kg	three- generation study	oral: feed	rat	not specified

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
(C16- C24)Alkylbenzenesulfoni c acid, Ca 70024-69-0	NOAEL 500 mg/kg	oral: gavage	29 d daily	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6	NOAEL 500 mg/kg	oral: gavage	29 d daily	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
Sulfonic acids, petroleum, calcium salts 61789-86-4	NOAEL 1.000 mg/kg	oral: gavage	28 d daily	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
Boron oxide (B2O3) 1303-86-2	NOAEL 100 mg/kg	oral: feed	2 y daily	rat	not specified

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:

Do not empty into drains / surface water / ground water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Calcium oxide 1305-78-8	LC50	50,6 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Calcium dihydroxide 1305-62-0	LC50	50,6 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
(C16-C24)Alkylbenzenesulfonic acid, Ca 70024-69-0	LC50		96 h	Cyprinodon variegatus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Sulfonic acids, petroleum, calcium salts 61789-86-4	LL50		96 h	Cyprinodon variegatus	OECD Guideline 203 (Fish, Acute Toxicity Test)

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Calcium oxide 1305-78-8	EC50	49,1 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Calcium dihydroxide 1305-62-0	EC50	49,1 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
(C16-C24)Alkylbenzenesulfonic acid, Ca 70024-69-0	EC50		48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6	EC50	> 1.000 mg/l	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
Sulfonic acids, petroleum, calcium salts 61789-86-4	EC50		48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Calcium oxide 1305-78-8	NOEC	32 mg/l	14 d	Crangon septemspinosa	OECD Guideline 202 (Daphnia sp. Chronic Immobilisation Test)
Calcium dihydroxide 1305-62-0	NOEC	32 mg/l	14 d	Crangon septemspinosa	OECD Guideline 202 (Daphnia sp. Chronic Immobilisation Test)

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Calcium oxide 1305-78-8	EC50	184,57 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Algal Growth Inhibition Test)
Calcium oxide 1305-78-8	NOEC	48 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Algal, Growth Inhibition Test)
Calcium dihydroxide 1305-62-0	EC50	184,57 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Algal, Growth Inhibition Test)
Calcium dihydroxide 1305-62-0	NOEC	48 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Algal, Growth Inhibition Test)
(C16- C24)Alkylbenzenesulfonic acid, Ca 70024-69-0	EC50		72 h	Pseudokirchneriella subcapitata	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)
(C16- C24)Alkylbenzenesulfonic acid, Ca 70024-69-0	NOEC		72 h	Pseudokirchneriella subcapitata	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)
Benzenesulfonic acid, C10-16- alkyl derivs., calcium salts 68584-23-6	EC50	> 1.000 mg/l	72 h	Pseudokirchneriella subcapitata	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)
Benzenesulfonic acid, C10-16- alkyl derivs., calcium salts 68584-23-6	NOEC	1.000 mg/l	72 h	Pseudokirchneriella subcapitata	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)
Sulfonic acids, petroleum, calcium salts 61789-86-4	EC50		72 h	Pseudokirchneriella subcapitata	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)
Sulfonic acids, petroleum, calcium salts 61789-86-4	NOEC		72 h	Pseudokirchneriella subcapitata	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Calcium oxide 1305-78-8	EC20	229,2 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Calcium dihydroxide 1305-62-0	EC20	229,2 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Sulfonic acids, petroleum, calcium salts 61789-86-4	EC50		3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

12.2. Persistence and degradability

The product is not biodegradable.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
(C16- C24)Alkylbenzenesulfonic acid, Ca 70024-69-0		aerobic	8 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Benzenesulfonic acid, C10-16- alkyl derivs., calcium salts 68584-23-6	not readily biodegradable.	aerobic	8 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Sulfonic acids, petroleum, calcium salts 61789-86-4		aerobic	8,6 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

12.3. Bioaccumulative potential

No data available for the product.

No substance data available.

12.4. Mobility in soil

Cured adhesives are immobile.

Hazardous substances CAS-No.	LogPow	Temperature	Method
(C16-C24)Alkylbenzenesulfonic acid, Ca 70024-69-0	10,88	25 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Sulfonic acids, petroleum, calcium salts 61789-86-4	23,21		QSAR (Quantitative Structure Activity Relationship)

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
Calcium oxide 1305-78-8	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Calcium dihydroxide 1305-62-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
(C16-C24)Alkylbenzenesulfonic acid, Ca 70024-69-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts 68584-23-6	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Sulfonic acids, petroleum, calcium salts 61789-86-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Boron oxide (B2O3) 1303-86-2	According to Annex XIII of regulation (EC) 1907/2006 a PBT and vPvB assessment shall not be conducted for inorganic substances.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Product disposal:

Cured adhesive: Dispose of as water insoluble non-toxic solid chemical in authorised landfill or incinerate under controlled conditions.

Dispose of in accordance with local and national regulations.

Contribution of this product to waste is very insignificant in comparison to article in which it is used

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Disposal must be made according to official regulations.

Waste code

14 06 03 - other solvents and solvent mixtures

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

SECTION 14: Transport information

- 14.1. UN number**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.2. UN proper shipping name**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.3. Transport hazard class(es)**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.4. Packing group**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.5. Environmental hazards**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.6. Special precautions for user**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**
not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

VOC content < 2 %
(2010/75/EC)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H360FD May damage fertility. May damage the unborn child.
H413 May cause long lasting harmful effects to aquatic life.

Further information:

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.

