

GB

Page 1 of 7
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 05.06.2018 / 0002
 Replacing version dated / version: 14.08.2017 / 0001
 Valid from: 05.06.2018
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 Marine Sealant 2K MS-3000/60 V2 - Komp. A
 Art.-Nr 3039

**Safety data sheet
 according to Regulation (EC) No 1907/2006, Annex II**

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

1.1 Product identifier

**Marine Sealant 2K MS-3000/60 V2 - Komp. A
 Art.-Nr 3039**

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

Relevant identified uses of the substance or mixture:

Adhesive
 Sector of use [SU]:
 SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

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Pantera Product GmbH, Südring 22, 21465 Wentorf b. Hamburg, Germany
 Phone:+49 (0) 40 72911000, Fax:+49 (0) 40 72911009
 info@panteraproduct.de

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

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+49 551 19240 (D-37075 Göttingen, 24 hour)

Telephone number of the company in case of emergencies:

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Eye Irrit.	2	H319-Causes serious eye irritation.
Skin Sens.	1	H317-May cause an allergic skin reaction.
Aquatic	3	H412-Harmful to aquatic life with long lasting effects.
Chronic		

2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)



Warning

H319-Causes serious eye irritation. H317-May cause an allergic skin reaction. H412-Harmful to aquatic life with long lasting effects.

P261-Avoid breathing vapours. P280-Wear protective gloves and eye protection / face protection. P314-Get medical advice / attention if you feel unwell.

N-(3-(trimethoxysilyl)propyl)ethylenediamine

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
 The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a.

3.2 Mixture

Trimethoxyvinylsilane	
Registration number (REACH)	01-2119513215-52-XXXX
Index	---
EINECS, ELINCS, NLP	220-449-8
CAS	2768-02-7
content %	1-10
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 3, H226 Acute Tox. 4, H332

N-(3-(trimethoxysilyl)propyl)ethylenediamine

Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	217-164-6
CAS	1760-24-3
content %	1-2,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Sens. 1, H317 Eye Dam. 1, H318 Acute Tox. 4, H332 Aquatic Chronic 2, H411

3-(trimethoxysilyl)propylamine	
Registration number (REACH)	01-2119510159-45-XXXX
Index	---
EINECS, ELINCS, NLP	237-511-5
CAS	13822-56-5
content %	1-2,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315 Eye Dam. 1, H318

Bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate	
Registration number (REACH)	01-2119978231-37-XXXX
Index	---
EINECS, ELINCS, NLP	264-513-3
CAS	63843-89-0
content %	0,01-0,1
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302 STOT RE 1, H372 Aquatic Chronic 1, H410 (M=10)

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.
 The substances named in this section are given with their actual, appropriate classification!
 For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

SECTION 4: First aid measures

4.1 Description of first aid measures

First-aiders should ensure they are protected!
 Never pour anything into the mouth of an unconscious person!

Inhalation

Remove person from danger area.
 Supply person with fresh air and consult doctor according to symptoms.

Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

Unsuitable cleaning product:

Solvent

Thinners

Eye contact

Remove contact lenses.
 Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion

Rinse the mouth thoroughly with water.
 Do not induce vomiting. Consult doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1. In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

4.3 Indication of any immediate medical attention and special treatment needed

n.c.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

CO2
 Extinction powder
 Water jet spray
 Large fire:
 Water jet spray / alcohol resistant foam

Unsuitable extinguishing media

None known

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon
 Oxides of nitrogen
 Toxic gases

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
 Protective respirator with independent air supply.
 According to size of fire
 Full protection, if necessary.
 Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure sufficient supply of air.
 Avoid contact with eyes or skin.
 If applicable, caution - risk of slipping.

6.2 Environmental precautions

If leakage occurs, dam up.
 Resolve leaks if this possible without risk.
 Prevent surface and ground-water infiltration, as well as ground penetration.
 Prevent from entering drainage system.
 If accidental entry into drainage system occurs, inform responsible authorities.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13.

Or:

Pick up mechanically and dispose of according to Section 13.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

GB

Page 2 of 7
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
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 Art.-Nr 3039

Ensure good ventilation.
 Avoid contact with eyes.
 Avoid long lasting or intensive contact with skin.
 Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
 Observe directions on label and instructions for use.
 Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
 Wash hands before breaks and at end of work.
 Keep away from food, drink and animal feedingstuffs.
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.
 Store product closed and only in original packing.
 Not to be stored in gangways or stair wells.
 Store cool.
 Store in a dry place.

7.3 Specific end use(s)

Adhesive

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

The methanol listed below can arise upon contact with water.

Chemical Name	Methanol	Content %:
WEL-TWA: 200 ppm (266 mg/m ³) (WEL), 200 ppm (260 mg/m ³) (EU)	WEL-STEL: 250 ppm (333 mg/m ³) (WEL)	---
Monitoring procedures:	<ul style="list-style-type: none"> - Compur - KITA-119 SA (549 640) - Compur - KITA-119 U (549 657) - Draeger - Alcohol 25/a Methanol (81 01 631) DFG (D) (Lösungsmittelgemische 6), DFG (E) (Solvent mixtures 6) - 1998, 2002 - EU project BC/CEN/ENTR/000/2002-16 card 65-1 (2004) - Draeger - Alcohol 100/a (CH 29 701) 	
BMGV: ---	Other information: Sk (WEL, EU)	

Chemical Name	Calcium carbonate	Content %:
WEL-TWA: 4 mg/m ³ (respirable dust), 10 mg/m ³ (total inhalable dust)	WEL-STEL: ---	---
Monitoring procedures:	---	
BMGV: ---	Other information: ---	

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage. ** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

8.2 Exposure controls

Trimethoxyvinylsilane						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,34	mg/l	
	Environment - marine		PNEC	0,03	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	3,4	mg/l	
	Environment - sewage treatment plant		PNEC	110	mg/l	
	Environment - sediment, freshwater		PNEC	0,27	mg/kg	
	Environment - sediment, marine		PNEC	0,12	mg/kg	
	Environment - soil		PNEC	0,04	mg/kg	
Consumer	Human - dermal	Short term, systemic effects	DNEL	26,9	mg/kg bw/day	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	93,4	mg/m ³	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,3	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	1,04	mg/m ³	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,3	mg/kg bw/day	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	0,69	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	4,9	mg/m ³	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,69	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	4,9	mg/kg	

N-(3-(trimethoxysilyl)propyl)ethylenediamine						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,06	mg/l	

	Environment - marine		PNEC	0,00	mg/m ³	
	Environment - sporadic (intermittent) release		DNEL	0,62	mg/l	
Consumer	Human - oral	Long term, systemic effects	DNEL	2,5	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	8,7	mg/m ³	
Consumer	Human - dermal	Long term, systemic effects	DNEL	2,5	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	35,5	mg/m ³	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	5	mg/kg bw/day	

3-(trimethoxysilyl)propylamine						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,33	mg/l	
	Environment - marine		PNEC	0,03	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	3,3	mg/l	
	Environment - sediment, freshwater		PNEC	1,2	mg/kg dry weight	
	Environment - sediment, marine		PNEC	0,12	mg/kg dry weight	
	Environment - soil		PNEC	0,04	mg/kg dry weight	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	17	mg/m ³	
Consumer	Human - dermal	Long term, systemic effects	DNEL	5	mg/kg bw/day	
Consumer	Human - oral	Long term, systemic effects	DNEL	5	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	58	mg/m ³	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	8,3	mg/kg bw/d	

Bis(1,2,2,6,6-pentamethyl-4-piperidyl) [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0	mg/l	
	Environment - marine		PNEC	0	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	0,61	mg/l	
	Environment - sediment, freshwater		PNEC	504,4	mg/kg dry weight	
	Environment - sediment, marine		PNEC	50,4	mg/kg dry weight	
	Environment - soil		PNEC	1	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,01	mg/m ³	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,03	mg/kg body weight/day	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,00	mg/kg body weight/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,05	mg/m ³	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,07	mg/kg bw/day	

Methanol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	154	mg/l	
	Environment - marine		PNEC	15,4	mg/l	
	Environment - sediment, freshwater		PNEC	570,4	mg/kg	
	Environment - sediment, marine		PNEC	57,0	mg/kg	
	Environment - soil		PNEC	23,5	mg/kg	
	Environment - water, sporadic (intermittent) release		PNEC	154	mg/l	
	Environment - sewage treatment plant		PNEC	100	mg/l	
	Environment - freshwater		PNEC	20,8	mg/l	
	Environment - marine		PNEC	2,08	mg/l	
	Environment - sediment		PNEC	77	mg/kg	
	Environment - sediment		PNEC	7,7	mg/kg	
Consumer	Human - inhalation	Long term, local effects	DNEL	50	mg/m ³	
Consumer	Human - dermal	Short term, systemic effects	DNEL	8	mg/kg body weight/day	

(GB)

Page 3 of 7

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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Marine Sealant 2K MS-3000/60 V2 - Komp. A

Art.-Nr 3039

Consumer	Human - inhalation	Short term, systemic effects	DNEL	50	mg/m3
Consumer	Human - oral	Short term, systemic effects	DNEL	8	mg/kg body weight/day
Consumer	Human - dermal	Long term, systemic effects	DNEL	8	mg/kg body weight/day
Consumer	Human - inhalation	Long term, systemic effects	DNEL	50	mg/m3
Consumer	Human - oral	Long term, systemic effects	DNEL	8	mg/kg body weight/day
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	40	mg/kg body weight/day
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	260	mg/m3
Workers / employees	Human - inhalation	Short term, local effects	DNEL	260	mg/m3
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	40	mg/kg body weight/day
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	260	mg/m3
Workers / employees	Human - inhalation	Long term, local effects	DNEL	260	mg/m3

Calcium carbonate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - sewage treatment plant		PNEC	100	mg/l	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	10	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	1,06	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	10	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	4,26	mg/m3	

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction. If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here. Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.

These are specified by e.g. BS EN 14042. BS EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable. Wash hands before breaks and at end of work. Keep away from food, drink and animal feedingstuffs. Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:
Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:
Chemical resistant protective gloves (EN 374).
Recommended
Protective nitrile gloves (EN 374)
Minimum layer thickness in mm:

>= 0,35
Permeation time (penetration time) in minutes:
>= 120
The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.
The recommended maximum wearing time is 50% of breakthrough time.
Protective hand cream recommended.

Skin protection - Other:
Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:
Normally not necessary.

Thermal hazards:
Not applicable

Additional information on hand protection - No tests have been performed. In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents. Selection of materials derived from glove manufacturer's indications. Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account. Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer. In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use. The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state: Pastelike, Liquid
Colour: White
Odour: Characteristic
Odour threshold: Not determined
pH-value: Not determined
Melting point/freezing point: Not determined
Initial boiling point and boiling range: Not determined
Flash point: 63 °C
Evaporation rate: Not determined
Flammability (solid, gas): Not determined
Lower explosive limit: Not determined
Upper explosive limit: Not determined
Vapour pressure: Not determined
Vapour density (air = 1): Not determined
Density: 1,43 g/cm3 (20°C)
Bulk density: n.a.
Solubility(ies): Not determined
Water solubility: Insoluble
Partition coefficient (n-octanol/water): Not determined
Auto-ignition temperature: n.a.
Decomposition temperature: Not determined
Viscosity: 39600 mPas (25°C)
Explosive properties: Product is not explosive.
Oxidising properties: No

9.2 Other information

Miscibility: Not determined
Fat solubility / solvent: Not determined
Conductivity: Not determined
Surface tension: Not determined
Solvents content: Not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

The product has not been tested.

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

reacts with water

10.4 Conditions to avoid

Strong heat
Moisture

10.5 Incompatible materials

None known

10.6 Hazardous decomposition products

In case of contact with water:
Methanol

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Possibly more information on health effects, see Section 2.1 (classification).

Marine Sealant 2K MS-3000/60 V2 - Komp. A

Art.-Nr 3039

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:	ATE	>20	mg/l/4h			Vapours, calculated value
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

Trimethoxyvinylsilane						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	7120	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	3200	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LD50	2773	ppm/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol
Acute toxicity, by inhalation:	LC50	16,8	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Slightly irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitising

Page 4 of 7
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
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 PDF print date: 20.06.2018
 Marine Sealant 2K MS-3000/60 V2 - Komp. A
 Art.-Nr 3039

Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Carcinogenicity:						Negative
Reproductive toxicity:	NOAE L	1000	mg/kg	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development, Tox. Screening Test)	Negative
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAE C	0,058		Rat	OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAE L	10	mg/l	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development, Tox. Screening Test)	Vapours
Symptoms:						drowsiness, dizziness, nausea, abdominal pain, breathing difficulties, visual disturbances

N-(3-(trimethoxysilyl)propyl)ethylenediamine						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	2413	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	1,49-2,44	mg/l/4h			Aerosol
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Dam. 1
Respiratory or skin sensitisation:					OECD 406 (Skin Sensitisation)	Sensitising (skin contact)
Symptoms:						respiratory distress, abdominal pain, unconsciousness, vomiting, coughing, headaches, mucous membrane irritation, dizziness

3-(trimethoxysilyl)propylamine						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>10000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Risk of serious damage to eyes.
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative, Analogous conclusion
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative, Analogous conclusion
Germ cell mutagenicity:				Mammalian	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative, Analogous conclusion
Germ cell mutagenicity:				Mammalian	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative, Analogous conclusion

Reproductive toxicity:	NOAE L	100	mg/kg			Analogous conclusion
Reproductive toxicity:	NOAE L	200	mg/kg	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	LOAE L	600	mg/kg	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Target organ(s): liver, Analogous conclusion
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAE L	200	mg/kg		OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Target organ(s): liver, Analogous conclusion

Bis(1,2,2,6,6-pentamethyl-4-piperidyl) [(3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl)methyl]butylmalonate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1490	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>3170	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:						Not irritant
Serious eye damage/irritation:						Not irritant
Respiratory or skin sensitisation:						Not sensitising

Methanol						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	300	mg/kg	Human being		Experiences on persons.
Acute toxicity, by dermal route:	LD50	17100	mg/kg	Rabbit		Does not conform with EU classification.
Acute toxicity, by inhalation:	LC50	85	mg/l/4h	Rat		Not relevant for classification, Vapours
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Mild irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitising
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						abdominal pain, vomiting, headaches, gastrointestinal disturbances, drowsiness, visual disturbances, watering eyes, nausea, mental confusion

Calcium carbonate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 420 (Acute Oral toxicity - Fixed Dose Procedure)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>3	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Not sensitising
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative

Page 5 of 7
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 05.06.2018 / 0002
 Replacing version dated / version: 14.08.2017 / 0001
 Valid from: 05.06.2018
 PDF print date: 20.06.2018
 Marine Sealant 2K MS-3000/60 V2 - Komp. A
 Art.-Nr 3039

Carcinogenicity:						No indications of such an effect.
Reproductive toxicity:	NOEL	1000	mg/kg bw/d	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development Tox. Screening Test)	
Specific target organ toxicity - single exposure (STOT-SE):						No indications of such an effect.
Specific target organ toxicity - repeated exposure (STOT-RE):						No indications of such an effect.
Aspiration hazard: Symptoms:						No indications of such an effect.
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	1000	mg/kg bw/d	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development Tox. Screening Test)	
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	0,212	mg/l	Rat	OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

Marine Sealant 2K MS-3000/60 V2 - Komp. A
 Art.-Nr 3039

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							n.d.a.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Other adverse effects:							n.d.a.

Trimethoxysilyl silane

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>=100	mg/l	Brachydanio rerio		
12.1. Toxicity to fish:	LC50	96h	191	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	168,7	mg/l	Daphnia magna	Regulation (EC) 440/2008 C.2 (DAPHNIA SP. ACUTE IMMOBILISATION TEST)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	>957	mg/l	Scenedesmus subspicatus		88/302/EC
12.1. Toxicity to algae:	IC50	72h	>100	mg/l	Selenastrum capricornutum		
12.1. Toxicity to algae:	EC50	72h	>957	mg/l	Scenedesmus subspicatus		
12.2. Persistence and degradability:		28d				OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50		>2500	mg/l	activated sludge		

N-(3-(trimethoxysilyl)propyl)ethylenediamine

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	597	mg/l	Brachydanio rerio		
12.1. Toxicity to fish:	LC50	96h	168	mg/l	Pimephales promelas		
12.1. Toxicity to daphnia:	EC50	72h	87,4	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	126	mg/l	Scenedesmus subspicatus		
12.1. Toxicity to algae:	NOEC/NOEL	72h	20	mg/l	Scenedesmus subspicatus		
12.2. Persistence and degradability:							Not readily biodegradable
Toxicity to bacteria:	EC10	16h	25	mg/l	Pseudomonas putida	DIN 38412 T.8	
Toxicity to bacteria:	EC50		435	mg/l	activated sludge		

3-(trimethoxysilyl)propylamine

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>934	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion
12.1. Toxicity to daphnia:	EC50	48h	331	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to algae:	EC50	72h	>1000	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion
12.2. Persistence and degradability:		28d	67	%		Regulation (EC) 440/2008 C.4-A (DETERMINATION OF "READY" BIODEGRADABILITY - DOC DIE-AWAY TEST)	Not readily biodegradable, Analogous conclusion
12.2. Persistence and degradability:		28d	67	%		OECD 301 A (Ready Biodegradability - DOC Die-Away Test)	Analogous conclusion
12.3. Bioaccumulative potential:							No
12.4. Mobility in soil:							Slight
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50		3400	mg/l	activated sludge		
Toxicity to bacteria:	EC10		13	mg/l	Pseudomonas putida		Analogous conclusion 5,75 h
Toxicity to bacteria:	EC50		43	mg/l	Pseudomonas putida		Analogous conclusion 5,75 h

Bis(1,2,2,6,6-pentamethyl-4-piperidyl) [(3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl)methyl]butylmalonate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	LOEC/LOEL	21d	6,4	µg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	61	mg/l	Scenedesmus subspicatus		
12.2. Persistence and degradability:		28d	1 - 2	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	

Methanol

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	15400	mg/l	Lepomis macrochirus		
12.1. Toxicity to daphnia:	EC50	48h	>10000	mg/l	Daphnia magna		
12.2. Persistence and degradability:		28d	99	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Readily biodegradable
12.3. Bioaccumulative potential:	BCF		28400		Chlorella vulgaris		
Other information:	DOC		<70	%			
Other information:	BOD		>60	%			

Calcium carbonate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
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(GB)

Page 6 of 7
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 05.06.2018 / 0002
 Replacing version dated / version: 14.08.2017 / 0001
 Valid from: 05.06.2018
 PDF print date: 20.06.2018
 Marine Sealant 2K MS-3000/60 V2 - Komp. A
 Art.-Nr 3039

12.1. Toxicity to fish:	LC50	96h			Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	No observation with saturated solution of test material.
12.1. Toxicity to daphnia:	EC50	48h			Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	No observation with saturated solution of test material.
12.1. Toxicity to algae:	EC50	72h	>14	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/N OEL	72h	14	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:							Not relevant for inorganic substances
12.3. Bioaccumulative potential:							Not to be expected
12.4. Mobility in soil:							n.a.
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	3h	>1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Toxicity to bacteria:	NOEC/N OEL	3h	1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other organisms:	EC50	21d	>1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Glycine max
Other organisms:	EC50	21d	>1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Lycopersicon esculentum
Other organisms:	EC50	21d	>1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Avena sativa
Other organisms:	NOEC/N OEL	21d	1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Glycine max
Other organisms:	NOEC/N OEL	21d	1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Lycopersicon esculentum
Other organisms:	NOEC/N OEL	21d	1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Avena sativa
Other organisms:	EC50	14d	>1000	mg/kg dw	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	
Other organisms:	NOEC/N OEL	14d	1000	mg/kg dw	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	
Other organisms:	EC50	28d	>1000	mg/kg dw		OECD 216 (Soil Microorganisms - Nitrogen Transformation Test)	

Other organisms:	NOEC/N OEL	28d	1000	mg/kg dw		OECD 216 (Soil Microorganisms - Nitrogen Transformation Test)
Water solubility:			0,0166	g/l		OECD 105 (Water Solubility) 20°C

SECTION 13: Disposal considerations

13.1 Waste treatment methods
For the substance / mixture / residual amounts
 EC disposal code no.:
 The waste codes are recommendations based on the scheduled use of this product. Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)
 08 04 09 waste adhesives and sealants containing organic solvents or other hazardous substances
 Recommendation:
 Sewage disposal shall be discouraged.
 Pay attention to local and national official regulations.
 E.g. suitable incineration plant.
 E.g. dispose at suitable refuse site.
For contaminated packing material
 Pay attention to local and national official regulations.
 Empty container completely.
 Uncontaminated packaging can be recycled.
 Dispose of packaging that cannot be cleaned in the same manner as the substance.
 15 01 10 packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

General statements
 14.1. UN number: n.a.
Transport by road/by rail (ADR/RID)
 14.2. UN proper shipping name:
 14.3. Transport hazard class(es): n.a.
 14.4. Packing group: n.a.
 Classification code: n.a.
 LQ: n.a.
 14.5. Environmental hazards: Not applicable
 Tunnel restriction code:
Transport by sea (IMDG-code)
 14.2. UN proper shipping name:
 14.3. Transport hazard class(es): n.a.
 14.4. Packing group: n.a.
 Marine Pollutant: n.a.
 14.5. Environmental hazards: Not applicable
Transport by air (IATA)
 14.2. UN proper shipping name:
 14.3. Transport hazard class(es): n.a.
 14.4. Packing group: n.a.
 14.5. Environmental hazards: Not applicable
14.6. Special precautions for user
 Unless specified otherwise, general measures for safe transport must be followed.
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
 Non-dangerous material according to Transport Regulations.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
 Observe restrictions:
 Comply with national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)!
 Comply with trade association/occupational health regulations.
 Directive 2010/75/EU (VOC): 2,35 %
15.2 Chemical safety assessment
 A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 15
 These details refer to the product as it is delivered.
 Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Eye Irrit. 2, H319	Classification according to calculation procedure.
Skin Sens. 1, H317	Classification according to calculation procedure.
Aquatic Chronic 3, H412	Classification according to calculation procedure.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).
 H226 Flammable liquid and vapour.
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H332 Harmful if inhaled.
 H372 Causes damage to organs through prolonged or repeated exposure.
 H410 Very toxic to aquatic life with long lasting effects.
 H411 Toxic to aquatic life with long lasting effects.
 Eye Irrit. — Eye irritation
 Skin Sens. — Skin sensitization
 Aquatic Chronic — Hazardous to the aquatic environment - chronic

(GB)

Page 7 of 7
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 05.06.2018 / 0002
 Replacing version dated / version: 14.08.2017 / 0001
 Valid from: 05.06.2018
 PDF print date: 20.06.2018
 Marine Sealant 2K MS-3000/60 V2 - Komp. A
 Art.-Nr 3039

Flam. Liq. — Flammable liquid
 Acute Tox. — Acute toxicity - inhalation
 Eye Dam. — Serious eye damage
 Skin Irrit. — Skin irritation
 Acute Tox. — Acute toxicity - oral
 STOT RE — Specific target organ toxicity - repeated exposure

Any abbreviations and acronyms used in this document:

AC Article Categories
 acc., acc. to according, according to
 ACGIH American Conference of Governmental Industrial Hygienists
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
 AOEL Acceptable Operator Exposure Level
 AOX Adsorbable organic halogen compounds
 approx. approximately
 Art., Art. no. Article number
 ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
 BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)
 BAUA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
 BCF Bioconcentration factor
 BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)
 BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)
 BMGV Biological monitoring guidance value (EH40, UK)
 BOD Biochemical oxygen demand
 BSEF Bromine Science and Environmental Forum
 bw body weight
 CAS Chemical Abstracts Service
 CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids
 CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques
 CIPAC Collaborative International Pesticides Analytical Council
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
 CMR carcinogenic, mutagenic, reproductive toxic
 COD Chemical oxygen demand
 CTFA Cosmetic, Toiletry, and Fragrance Association
 DMEL Derived Minimum Effect Level
 DNEL Derived No Effect Level
 DOC Dissolved organic carbon
 DT50 Dwell Time - 50% reduction of start concentration
 DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)
 dw dry weight
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
 EC European Community
 ECHA European Chemicals Agency
 EEA European Economic Area
 EEC European Economic Community
 EINECS European Inventory of Existing Commercial Chemical Substances
 ELINCS European List of Notified Chemical Substances
 EN European Norms
 EPA United States Environmental Protection Agency (United States of America)
 ERC Environmental Release Categories
 ES Exposure scenario
 etc. et cetera
 EU European Union
 EWC European Waste Catalogue
 Fax. Fax number
 gen. general
 GHS Globally Harmonized System of Classification and Labelling of Chemicals
 GWP Global warming potential
 HET-CAM Hen's Egg Test - Chorionallantoic Membrane
 HGWP Halocarbon Global Warming Potential
 IARC International Agency for Research on Cancer
 IATA International Air Transport Association
 IBC Intermediate Bulk Container
 IBC (Code) International Bulk Chemical (Code)
 IC Inhibitory concentration
 IMDG-code International Maritime Code for Dangerous Goods
 incl. including, inclusive
 IUCLID International Uniform Chemical Information Database
 LC lethal concentration
 LC50 lethal concentration 50 percent kill
 LCLo lowest published lethal concentration
 LD Lethal Dose of a chemical
 LD50 Lethal Dose, 50% kill
 LDLo Lethal Dose Low
 LOAEL Lowest Observed Adverse Effect Level
 LOEC Lowest Observed Effect Concentration
 LOEL Lowest Observed Effect Level
 LQ Limited Quantities
 MARPOL International Convention for the Prevention of Marine Pollution from Ships
 n.a. not applicable
 n.av. not available
 n.c. not checked
 n.d.a. no data available
 NIOSH National Institute of Occupational Safety and Health (United States of America)
 NOAEC No Observed Adverse Effective Concentration
 NOAEL No Observed Adverse Effect Level
 NOEC No Observed Effect Concentration
 NOEL No Observed Effect Level
 ODP Ozone Depletion Potential
 OECD Organisation for Economic Co-operation and Development
 org. organic
 PAH polycyclic aromatic hydrocarbon
 PBT persistent, bioaccumulative and toxic
 PC Chemical product category
 PE Polyethylene
 PNEC Predicted No Effect Concentration
 POCP Photochemical ozone creation potential
 ppm parts per million
 PROC Process category
 PTFE Polytetrafluorethylene

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
 REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
 RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
 SADT Self-Accelerating Decomposition Temperature
 SAR Structure Activity Relationship
 SU Sector of use
 SVHC Substances of Very High Concern
 Tel. Telephone
 ThOD Theoretical oxygen demand
 TOC Total organic carbon
 TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)
 UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
 VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))
 VOC Volatile organic compounds
 vPvB very persistent and very bioaccumulative
 WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).
 WHO World Health Organization
 wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge. No responsibility.

These statements were made by:
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