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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 14.07.2023 / 0001
Replacing version dated / version: 14.07.2023 / 0001
Valid from: 14.07.2023
PDF print date: 14.07.2023
Adhesive sealant PL-Hybrid

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

Adhesive sealant PL-Hybrid

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

Relevant identified uses of the substance or mixture:

Adhesive sealant

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet



Dosteba GmbH
Aspenhaustraße 6
D-72770 Reutlingen
Telefon: +49 7121 30177 10
Fax: +49 7121 30177 20
dosteba@dosteba.eu

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:



Joint poison information centre of the Federal States of Mecklenburg-Vorpommern, Saxony, Saxony-Anhalt and Thuringia.
Nordhäuser Str. 74, D - 99089 Erfurt, Tel.: +49 361 73 07 30 (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)

The mixture is not classified as dangerous in the terms of the Regulation (EC) 1272/2008 (CLP).

2.2 Label elements

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

EUH208-Contains Trimethoxyvinylsilane, N-(3-(trimethoxysilyl)propyl)ethylenediamine, Dioctylbis(pentane-2,4-dionato-O,O')tin. May produce an allergic reaction.

EUH210-Safety data sheet available on request.

EUH212-Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

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 %).

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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 %).
 The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

SECTION 3: Composition/information on ingredients

3.1 Substances

n.a.

3.2 Mixtures

Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 µm)	
Registration number (REACH)	01-2119489379-17-XXXX
Index	022-006-002
EINECS, ELINCS, NLP, REACH-IT List-No.	236-675-5
CAS	13463-67-7
content %	1-<100
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Carc. 2, H351 (as inhalation)

Reaction mass of N,N'-ethane-1,2-diylbis(hexanamide) and 12-hydroxy-N-[2-[(1-oxyhexyl)amino]ethyl]octadecanamide and N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)	
Registration number (REACH)	01-0000017860-69-XXXX
Index	616-200-00-1
EINECS, ELINCS, NLP, REACH-IT List-No.	432-430-3
CAS	---
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Aquatic Chronic 4, H413

Trimethoxyvinylsilane	
Registration number (REACH)	01-2119513215-52-XXXX
Index	014-049-00-0
EINECS, ELINCS, NLP, REACH-IT List-No.	220-449-8
CAS	2768-02-7
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Sens. 1B, H317

N-(3-(trimethoxysilyl)propyl)ethylenediamine	
Registration number (REACH)	01-2119970215-39-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	217-164-6
CAS	1760-24-3
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT SE 3, H335
Specific Concentration Limits and ATE	ATE (as inhalation, Vapours): 12,6 mg/l/4h

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	
Registration number (REACH)	01-2119537297-32-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	258-207-9
CAS	52829-07-9
content %	0,1-<1

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Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Eye Dam. 1, H318 Repr. 2, H361f Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411
Diocetylbis(pentane-2,4-dionato-O,O')tin	
Registration number (REACH)	01-0000020199-67-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	483-270-6
CAS	54068-28-9
content %	0,01-<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Sens. 1, H317 STOT SE 2, H371 (immune system) (oral)
Specific Concentration Limits and ATE	Skin Sens. 1, H317: >=5 %

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

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.

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.
 Give copious water to drink. Consult doctor if necessary.

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.
 Repeated exposure may cause skin dryness or cracking.
 Allergic reaction possible.

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water jet spray/foam/CO2/dry extinguisher

Unsuitable extinguishing media

High volume water jet

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

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For personal protective equipment see Section 8.
 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

6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.
 Ensure sufficient ventilation, remove sources of ignition.
 Avoid dust formation with solid or powder products.
 Leave the danger zone if possible, use existing emergency plans if necessary.
 Avoid contact with eyes or skin.

6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

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

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

Ensure good ventilation.
 Avoid contact with eyes or skin.
 Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
 Observe directions on label and instructions for use.

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

Store product closed and only in original packing.
 Not to be stored in gangways or stair wells.
 Store at room temperature.
 Store in a dry place.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters



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WEL-TWA: 10 mg/m3 (total inhalable dust), 4 mg/m3 (respirable dust)	WEL-STEL: ---	---
Monitoring procedures: ---		
BMGV: ---	Other information: ---	

Chemical Name Diocetylbis(pentane-2,4-dionato-O,O')tin		
WEL-TWA: 0,1 mg/m3 (Sn) (tin compounds, organic)	WEL-STEL: 0,2 mg/m3 (Sn) (tin compounds, organic)	---
Monitoring procedures: ---		
BMGV: ---	Other information: Sk (Sn) (tin compounds, organic)	

Chemical Name general dust limit		
WEL-TWA: 10 mg/m3 (inhal. dust), 4 mg/m3 (respir. dust)	WEL-STEL: ---	---
Monitoring procedures: ---		
BMGV: ---	Other information: ---	

Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm)						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,184	mg/l	
	Environment - marine		PNEC	0,0184	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	0,193	mg/l	
	Environment - sewage treatment plant		PNEC	100	mg/l	
	Environment - sediment, freshwater		PNEC	1000	mg/kg dw	
	Environment - sediment, marine		PNEC	100	mg/kg dw	
	Environment - soil		PNEC	100	mg/kg dw	
	Environment - oral (animal feed)		PNEC	1667	mg/kg feed	
Consumer	Human - oral	Long term, systemic effects	DNEL	700	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	10	mg/m3	

Reaction mass of N,N'-ethane-1,2-diylbis(hexanamide) and 12-hydroxy-N-[2-[(1-oxihexyl)amino]ethyl]octadecanamide and N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,009	mg/l	
	Environment - marine		PNEC	0,001	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	3,7	mg/l	
	Environment - sediment, freshwater		PNEC	384	mg/kg dw	
	Environment - sediment, marine		PNEC	38,4	mg/kg dw	
	Environment - soil		PNEC	52,1	mg/kg dw	
	Environment - oral (animal feed)		PNEC	222,2	mg/kg dw	

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	Environment - sewage treatment plant		PNEC	100	mg/l	
Consumer	Human - oral	Long term, systemic effects	DNEL	5	mg/kg bw/d	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	10	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	35,24	mg/m3	

Trimethoxyvinylsilane						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,4	mg/l	Für entsprechendes Silantriol (Hydrolysp produkt) ermittelt.
	Environment - marine		PNEC	0,04	mg/l	Für entsprechendes Silantriol (Hydrolysp produkt) ermittelt.
	Environment - water, sporadic (intermittent) release		PNEC	2,4	mg/l	Für entsprechendes Silantriol (Hydrolysp produkt) ermittelt.
	Environment - sewage treatment plant		PNEC	6,6	mg/l	Für entsprechendes Silantriol (Hydrolysp produkt) ermittelt.
	Environment - sediment, freshwater		PNEC	1,5	mg/kg dw	Für entsprechendes Silantriol (Hydrolysp produkt) ermittelt.
	Environment - sediment, marine		PNEC	0,15	mg/kg dw	Für entsprechendes Silantriol (Hydrolysp produkt) ermittelt.

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	Environment - soil		PNEC	0,06	mg/kg dw	Für entsprech endes Silantriol (Hydrolysp rodukt) ermittelt.
Consumer	Human - dermal	Short term, systemic effects	DNEL	0,1	mg/kg bw/day	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,63	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	6,8	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,63	mg/kg bw/day	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	93,4	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,91	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	27,6	mg/m3	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	4,9	mg/m3	

N-(3-(trimethoxysilyl)propyl)ethylenediamine						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,062	mg/l	
	Environment - marine		PNEC	0,0062	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	0,62	mg/l	
	Environment - sediment, freshwater		PNEC	0,05	mg/kg wet weight	
	Environment - sediment, marine		PNEC	0,005	mg/kg wet weight	
	Environment - sewage treatment plant		PNEC	25	mg/l	
	Environment - soil		PNEC	0,009	mg/kg	
Consumer	Human - oral	Long term, systemic effects	DNEL	2,5	mg/kg	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	50	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,1	mg/m3	
Consumer	Human - inhalation	Short term, local effects	DNEL	4	mg/m3	
Consumer	Human - oral	Short term, systemic effects	DNEL	2,5	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	8,7	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	2,5	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	35,5	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	5	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,6	mg/m3	

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Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	260	mg/m3	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	5,36	mg/m3	

Diocetylbis(pentane-2,4-dionato-O,O')tin						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - sporadic (intermittent) release		PNEC	260	µg/l	
	Environment - freshwater		PNEC	26	µg/l	
	Environment - sediment, freshwater		PNEC	0,155	mg/kg dry weight	
	Environment - marine		PNEC	2,6	µg/l	
	Environment - sediment, marine		PNEC	0,0155	mg/kg dry weight	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,07	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,091	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	84	mg/m3	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	0,091	mg/m3	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	84	mg/m3	

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,018	mg/l	
	Environment - marine		PNEC	0,0018	mg/l	
	Environment - sediment, freshwater		PNEC	29	mg/kg	
	Environment - sediment, marine		PNEC	2,9	mg/kg	
	Environment - soil		PNEC	5,9	mg/kg	
	Environment - water, sporadic (intermittent) release		PNEC	0,007	mg/l	
	Environment - sewage treatment plant		PNEC	1	mg/l	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	5,6	mg/m3	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	5,6	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	2	mg/kg body weight/day	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	2	mg/kg	

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 (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (11) = Inhalable fraction (Directive 2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (Directive 2004/37/CE). | 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.

(13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14) = The substance can cause sensitisation of the skin (Directive 2004/37/CE).

8.2 Exposure controls

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. EN 14042.

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 ISO 374).

If applicable

Protective gloves made of butyl (EN ISO 374).

Protective Neoprene® / polychloroprene gloves (EN ISO 374).

Protective nitrile gloves (EN ISO 374).

Protective PVC gloves (EN ISO 374).

Minimum layer thickness in mm:

0,5

Permeation time (penetration time) in minutes:

480

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.

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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:	Paste, solid.
Colour:	According to specification
Odour:	Characteristic
Melting point/freezing point:	There is no information available on this parameter.
Boiling point or initial boiling point and boiling range:	There is no information available on this parameter.
Flammability:	There is no information available on this parameter.
Lower explosion limit:	Does not apply to solids.
Upper explosion limit:	Does not apply to solids.
Flash point:	Does not apply to solids.
Auto-ignition temperature:	Does not apply to solids.
Decomposition temperature:	There is no information available on this parameter.
pH:	There is no information available on this parameter.
Kinematic viscosity:	There is no information available on this parameter.
Solubility:	There is no information available on this parameter.
Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	There is no information available on this parameter.
Density and/or relative density:	1,045 g/cm ³ (20°C)
Relative vapour density:	Does not apply to solids.
Particle characteristics:	There is no information available on this parameter.

9.2 Other information

No information available at present.

SECTION 10: Stability and reactivity

10.1 Reactivity

This product is not reactive based on experiences.

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

No dangerous reactions are known.

10.4 Conditions to avoid

See also section 7.

None known

10.5 Incompatible materials

See also section 7.

None known

10.6 Hazardous decomposition products

See also section 5.2

No decomposition when used as directed.

SECTION 11: Toxicological information

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

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

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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:						n.d.a.

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Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:					OECD 497 (Defined Approaches on Skin Sensitisation)	Not sensitising
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.

Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$)						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 425 (Acute Oral Toxicity - Up-and-Down Procedure)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	>6,8	mg/l/4h	Rat		
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, Mechanical irritation possible.
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Not sensitising
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Mammalian	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	(Ames-Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity (Developmental toxicity):				Rat	OECD 414 (Prenatal Developmental Toxicity Study)	No indications of such an effect.
Specific target organ toxicity - single exposure (STOT-SE):						Not irritant (respiratory tract).
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	3500	mg/kg/d	Rat		(90d)

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Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	10	mg/m3	Rat		(90d)
Symptoms:						mucous membrane irritation, coughing, respiratory distress, drying of the skin.

Reaction mass of N,N'-ethane-1,2-diylbis(hexanamide) and 12-hydroxy-N-[2-[(1-oxihexyl)amino]ethyl]octadecanamide and N,N'-ethane-1,2-diylbis(12-hydroxyoctadecanamide)

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat		
Skin corrosion/irritation:						Not irritant
Serious eye damage/irritation:						Not irritant
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	1000	mg/kg bw/d			(28 d)
Symptoms:						nausea and vomiting., stomach pain, diarrhoea

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:	LC50	16,8	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours
Acute toxicity, by inhalation:	LD50	2773	ppm/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol
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:				Guinea pig	OECD 406 (Skin Sensitisation)	Skin Sens. 1B
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative Chinese hamster
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Rat	OECD 489 (In Vivo Mammalian Alkaline Comet Assay)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative

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Reproductive toxicity:	NOAEL	1000	mg/kg	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development. Tox. Screening Test)	Negative
Reproductive toxicity (Developmental toxicity):	NOAEL	>= 75	mg/kg	Rabbit	OECD 414 (Prenatal Developmental Toxicity Study)	Negative
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	62,5	mg/kg	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Target organ(s): bladder
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	LOAEL	0,58	mg/l	Rat	OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	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	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	> 2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	1,49-2,44	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	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:				Guinea pig	OECD 406 (Skin Sensitisation)	Skin Sens. 1B
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Skin Sens. 1B
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative Chinese hamster
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative

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Reproductive toxicity (Developmental toxicity):	NOAEL	>=500	mg/kg	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development. Tox. Screening Test)	
Reproductive toxicity (Effects on fertility):	NOAEL	>=500	mg/kg	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development. Tox. Screening Test)	
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	>= 500	mg/kg	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	0,015	mg/l/6h/d	Rat	OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	

Diocetylbis(pentane-2,4-dionato-O,O')tin						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	2500	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:						Not irritant
Serious eye damage/irritation:						Not irritant
Respiratory or skin sensitisation:		>5	%	Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Sensitising (skin contact)
Reproductive toxicity:					OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development. Tox. Screening Test)	Negative
Specific target organ toxicity - single exposure (STOT-SE), oral:						Target organ(s): immune system
Specific target organ toxicity - repeated exposure (STOT-RE):					OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	Negative

11.2. Information on other hazards

Adhesive sealant PL-Hybrid						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Endocrine disrupting properties:						Does not apply to mixtures.

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Other information:						No other relevant information available on adverse effects on health.
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SECTION 12: Ecological information

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

Adhesive sealant PL-Hybrid							
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. Endocrine disrupting properties:							Does not apply to mixtures.
12.7. Other adverse effects:							No information available on other adverse effects on the environment.

Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm)							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	LC50	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	16	mg/l	Pseudokirchneria subcapitata	U.S. EPA-600/9-78-018	
12.2. Persistence and degradability:							Not relevant for inorganic substances.
12.3. Bioaccumulative potential:	BCF	42d	9,6				Not to be expected
12.3. Bioaccumulative potential:	BCF	14d	19-352				Oncorhynchus mykiss
12.4. Mobility in soil:							Negative
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:			>5000	mg/l	Escherichia coli		
Toxicity to bacteria:	LC0	24h	>10000	mg/l	Pseudomonas fluorescens		
Toxicity to annelids:	NOEC/NOEL		>1000	mg/kg	Eisenia foetida		
Water solubility:							Insoluble 20°C

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Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>1000	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to daphnia:	EC50	48h	>1000	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	250	mg/l			
12.1. Toxicity to algae:	NOEC/NOEL	72h	125	mg/l			
12.2. Persistence and degradability:		28d	<70	%			Not readily biodegradable

Trimethoxysilylpropylamine

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
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 daphnia:	NOEC/NOEL	21d	28	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EC50	72h	>100	mg/l	Selenastrum capricornutum	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	25	mg/l	Selenastrum capricornutum		
12.2. Persistence and degradability:	BOD	28d	51	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Not readily biodegradable
12.3. Bioaccumulative potential:	Log Kow		1,1				Not to be expected 20 °C
12.4. Mobility in soil:							Slight
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC10	5h	1000	mg/l	Pseudomonas putida		
Toxicity to bacteria:	EC50	3h	>2500	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

N-(3-(trimethoxysilyl)propyl)ethylenediamine

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
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12.1. Toxicity to fish:	LC50	96h	597	mg/l	Brachydanio rerio	Regulation (EC) 440/2008 C.1 (ACUTE TOXICITY FOR FISH)	
12.1. Toxicity to daphnia:	EC50	48h	81	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	> 1	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EC50	72h	8,8	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	3,1	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:	DOC	28d	39	%	activated sludge	Regulation (EC) 440/2008 C.4-A (DETERMINATION OF 'READY' BIODEGRADABILITY - DOC DIE-AWAY TEST)	Not readily biodegradable
12.3. Bioaccumulative potential:							Low
12.4. Mobility in soil:							Slight
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC10	16h	25	mg/l	Pseudomonas putida	DIN 38412 T.8	
Other organisms:	NOEC/NOEL	14d	>= 1000	mg/kg	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	

Diocetylbis(pentane-2,4-dionato-O,O')tin							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	86	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	58,6	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	24h	300	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
Water solubility:			0,03	g/l			20°C

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

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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
 08 04 10 waste adhesives and sealants other than those mentioned in 08 04 09

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 02 plastic packaging

SECTION 14: Transport information

General statements

Transport by road/by rail (ADR/RID)

14.1. UN number or ID number:	Not applicable
14.2. UN proper shipping name:	
Not applicable	
14.3. Transport hazard class(es):	Not applicable
14.4. Packing group:	Not applicable
14.5. Environmental hazards:	Not applicable
Tunnel restriction code:	Not applicable
Classification code:	Not applicable
LQ:	Not applicable
Transport category:	Not applicable

Transport by sea (IMDG-code)

14.1. UN number or ID number:	Not applicable
14.2. UN proper shipping name:	
Not applicable	
14.3. Transport hazard class(es):	Not applicable
14.4. Packing group:	Not applicable
14.5. Environmental hazards:	Not applicable
Marine Pollutant:	Not applicable
EmS:	Not applicable

Transport by air (IATA)

14.1. UN number or ID number:	Not applicable
14.2. UN proper shipping name:	
Not applicable	
14.3. Transport hazard class(es):	Not applicable
14.4. Packing group:	Not applicable
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. Maritime transport in bulk according to IMO instruments

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

15.2 Chemical safety assessment

Observe restrictions:

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Comply with national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)!
 Regulation (EC) No 1907/2006, Annex XVII
 Dioctylbis(pentane-2,4-dionato-O,O')tin
 Regulation (EU) No 649/2012 'concerning the export and import of hazardous chemicals' must be adhered to, as the product contains a substance that falls within the scope of this Regulation.
 General hygiene measures for the handling of chemicals are applicable.

Directive 2010/75/EU (VOC): < 1 %

National requirements/regulations on safety and health protection must be applied when using work equipment.

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: n.a.

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

Not applicable

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).

H361f Suspected of damaging fertility.
 H226 Flammable liquid and vapour.
 H351 Suspected of causing cancer by inhalation.
 H371 May cause damage to organs if swallowed.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H332 Harmful if inhaled.
 H335 May cause respiratory irritation.
 H400 Very toxic to aquatic life.
 H411 Toxic to aquatic life with long lasting effects.
 H413 May cause long lasting harmful effects to aquatic life.

Carc. — Carcinogenicity
 Aquatic Chronic — Hazardous to the aquatic environment - chronic
 Flam. Liq. — Flammable liquid
 Acute Tox. — Acute toxicity - inhalation
 Skin Sens. — Skin sensitization
 Eye Dam. — Serious eye damage
 STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation
 Repr. — Reproductive toxicity
 Aquatic Acute — Hazardous to the aquatic environment - acute
 STOT SE — Specific target organ toxicity - single exposure

Key literature references and sources for data:

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.
 Guidelines for the preparation of safety data sheets as amended (ECHA).
 Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).
 Safety data sheets for the constituent substances.
 ECHA Homepage - Information about chemicals.
 GESTIS Substance Database (Germany).
 German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).
 EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.
 National Lists of Occupational Exposure Limits for each country as amended.
 Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

Any abbreviations and acronyms used in this document:

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acc., acc. to according, according to

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOX Adsorbable organic halogen compounds

approx. approximately

Art., Art. no. Article number

ASTM ASTM International (American Society for Testing and Materials)

ATE Acute Toxicity Estimate

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

BSEF The International Bromine Council

bw body weight

CAS Chemical Abstracts Service

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR carcinogenic, mutagenic, reproductive toxic

DMEL Derived Minimum Effect Level

DNEL Derived No Effect Level

DOC Dissolved organic carbon

dw dry weight

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)

EC European Community

ECHA European Chemicals Agency

ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect

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)

ErCx, EμCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)

etc. et cetera

EU European Union

EVAL Ethylene-vinyl alcohol copolymer

Fax. Fax number

gen. general

GHS Globally Harmonized System of Classification and Labelling of Chemicals

GWP Global warming potential

Koc Adsorption coefficient of organic carbon in the soil

Kow octanol-water partition coefficient

IARC International Agency for Research on Cancer

IATA International Air Transport Association

IBC (Code) International Bulk Chemical (Code)

IMDG-code International Maritime Code for Dangerous Goods

incl. including, inclusive

IUCLID International Uniform Chemical Information Database

IUPAC International Union for Pure Applied Chemistry

LC50 Lethal Concentration to 50 % of a test population

LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)

Log Koc Logarithm of adsorption coefficient of organic carbon in the soil

Log Kow, Log Pow Logarithm of octanol-water partition coefficient

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

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NIOSH National Institute for Occupational Safety and Health (USA)

NLP No-longer-Polymer

NOEC, NOEL No Observed Effect Concentration/Level

OECD Organisation for Economic Co-operation and Development

org. organic

OSHA Occupational Safety and Health Administration (USA)

PBT persistent, bioaccumulative and toxic

PE Polyethylene

PNEC Predicted No Effect Concentration

ppm parts per million

PVC Polyvinylchloride

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)

SVHC Substances of Very High Concern

Tel. Telephone

TOC Total organic carbon

UN RTDG United Nations Recommendations on the Transport of Dangerous Goods

VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative

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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