

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

### 1.1 Product identifier

White Opaque Primer (17-0533)

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

Coating for industry. Paint/paint-related material for industrial/professional use.

### 1.3 Details of the supplier of the safety data sheet

**Supplier (manufacturer/importer/only representative/downstream user/distributor)**

Address:

Mighton Products Ltd  
Hinxtton, Cambridgeshire  
CB10 1RG

Tel:

+44 (0) 1223 497097

United Kingdom Fax:

+44 (0) 1223 839896

Email:

sales@mighton.co.uk

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

This mixture is classified as not hazardous according to 1999/45/EC.

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

None

### 2.2 Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

**Special rules for supplemental label elements for certain mixtures**

EUH210 Safety data sheet available on request.

### 2.3 Other hazards

None

## SECTION 3: Composition / information on ingredients

### 3.2 Mixtures

#### Hazardous ingredients

TITANIUM DIOXIDE ; REACH registration No. : 01-2119489379-17 ; EC No. : 236-675-5; CAS No. : 13463-67-7

Weight fraction : 10 - 25 %

Classification 1272/2008 [CLP] : None

#### Additional information

Full text of R-, H- and EUH-phrases: see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

When in doubt or if symptoms are observed, get medical advice. Never give anything by mouth to an unconscious person or a person with cramps. If unconscious place in recovery position and seek medical advice.

#### **Following inhalation**

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice.

#### **In case of skin contact**

Remove contaminated clothing and wash it before reuse. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or diluting agents for skin cleaning.

#### **After eye contact**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, keep eyelids open.

#### **After ingestion**

If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

#### **4.2 Most important symptoms and effects, both acute and delayed**

No information available.

#### **4.3 Indication of any immediate medical attention and special treatment needed**

None

### **SECTION 5: Firefighting measures**

#### **5.1 Extinguishing media**

##### **Suitable extinguishing media**

Alcohol resistant foam; Carbon dioxide (CO<sub>2</sub>); Extinguishing powder; Water mist;

##### **Unsuitable extinguishing media**

Strong water jet

#### **5.2 Special hazards arising from the substance or mixture**

##### **Hazardous combustion products**

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool endangered containers with water in case of fire.

#### **5.3 Advice for firefighters**

##### **Special protective equipment for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Do not allow run-off from fire-fighting to enter drains or water courses.

### **SECTION 6: Accidental release measures**

#### **6.1 Personal precautions, protective equipment and emergency procedures**

##### **For non-emergency personnel**

###### **Personal precautions**

Do not inhale the vapour.

#### **6.2 Environmental precautions**

Do not allow to enter ground-water, surface water or drains, even not in small quantities. If the product contaminates lakes, rivers or sewages, inform appropriate authorities in accordance with local regulations.

#### **6.3 Methods and material for containment and cleaning up**

##### **For containment**

Prevent spread over a wide area (e.g. by containment or oil barriers). Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). Clean preferably with a detergent; avoid use of solvents.

#### **6.4 Reference to other sections**

None

## SECTION 7: Handling and storage



### 7.1 Precautions for safe handling

#### Protective measures

##### Measures to prevent fire

Avoid contact with skin, eyes and clothes. Do not breathe gas/vapour/aerosol. When using do not eat, drink, smoke, sniff. Never use pressure to empty container. Keep/Store only in original container. See chapter 8 of the safety data sheet (Personal protection equipment) Comply with the health and safety at work laws. Do not allow to enter ground-water, surface water or drains, even not in small quantities.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Requirements for storage rooms and vessels

Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

#### Further information on storage conditions

Use only in well-ventilated areas. Store between +5 and +35 °C in a dry, well ventilated place away from sources of heat and direct sunlight. When using do not smoke. Only allow access to authorised staff. Prevent leaks and prevent soil / water pollution caused by leaks.

### 7.3 Specific end use(s)

None

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limit values

TRIETHYLAMINE ; CAS No. : 121-44-8

Limit value type (country of origin) : STEL ( EC )

Limit value : 3 ppm / 12,6 mg/m<sup>3</sup>

Remark : H

Version : 08-06-2000

Limit value type (country of origin) : TWA ( EC )

Limit value : 2 ppm / 8,4 mg/m<sup>3</sup>

Remark : H

Version : 08-06-2000

Limit value type (country of origin) : Exposure Limit (8h) ( NL )

Limit value : 4,2 mg/m<sup>3</sup>

Remark : H

Version : 01-01-2007

Limit value type (country of origin) : Exposure Limit (15min) ( NL )

Limit value : 12,6 mg/m<sup>3</sup>

Remark : H

Version : 01-01-2007

#### DNEL/ DMEL and PNEC values

##### DNEL/DMEL

Limit value type : DNEL Consumer (systemic) ( TITANIUM DIOXIDE ; CAS No. : 13463-67-7 )

Exposure route : Oral

Exposure frequency : Long-term (repeated)

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Limit value:	700 mg/kg
Safety factor:	5
Limit value type:	DNEL worker (local) ( TITANIUM DIOXIDE ; CASNo. : 13463-67-7 )
Exposure route:	Inhalation
Exposure frequency:	Long-term (repeated)
Limit value:	10 mg/m <sup>3</sup>
Safety factor:	3
Limit value type:	DNEL worker (local) ( TRIETHYLAMINE ; CASNo. : 121-44-8 )
Exposure route:	Inhalation
Exposure frequency:	Long-term (repeated)
Limit value:	8,4 mg/m <sup>3</sup>
Limit value type:	DNEL worker (local) ( TRIETHYLAMINE ; CASNo. : 121-44-8 )
Exposure route:	Inhalation
Exposure frequency:	Short-term (acute)
Limit value:	12,6 mg/m <sup>3</sup>
Limit value type:	DNEL worker (systemic) ( TRIETHYLAMINE ; CAS No. : 121-44-8 )
Exposure route:	Inhalation
Exposure frequency:	Long-term (repeated)
Limit value:	8,4 mg/m <sup>3</sup>
Limit value type:	DNEL worker (systemic) ( TRIETHYLAMINE ; CAS No. : 121-44-8 )
Exposure route:	Inhalation
Exposure frequency:	Short-term (acute)
Limit value:	12,6 mg/m <sup>3</sup>
Limit value type:	DNEL worker (systemic) ( TRIETHYLAMINE ; CAS No. : 121-44-8 )
Exposure route:	Dermal
Exposure frequency:	Long-term (repeated)
Limit value:	12,1 mg/kg
Safety factor:	24
Limit value type:	DNEL Consumer (local) ( NEODECANOIC ACID, COBALT SALT ; CAS No. : 27253-31-2 )
Exposure route:	Inhalation
Exposure frequency:	Long-term (repeated)
Limit value:	43 µg/m <sup>3</sup>
Limit value type:	DNEL Consumer (systemic) ( NEODECANOIC ACID, COBALT SALT ; CAS No. : 27253-31-2 )
Exposure route:	Oral
Exposure frequency:	Long-term (repeated)
Limit value:	64,9 µg/l
Safety factor:	50
Limit value type:	DNEL worker (local) ( NEODECANOIC ACID, COBALT SALT ; CAS No. : 27253-31-2 )
Exposure route:	Inhalation
Exposure frequency:	Long-term (repeated)
Limit value:	273,2 µg/m <sup>3</sup>
<b>PNEC</b>	
Limit value type:	PNEC aquatic, freshwater ( TITANIUM DIOXIDE ; CASNo. : 13463-67-7 )
Limit value:	0,127 mg/l
Safety factor:	100
Limit value type:	PNEC aquatic, intermittent release ( TITANIUM DIOXIDE ; CASNo. : 13463-67-7 )
Limit value:	0,61 mg/l
Safety factor:	100
Limit value type:	PNEC aquatic, marine water ( TITANIUM DIOXIDE ; CAS No. : 13463-67-7 )
Limit value:	1 mg/l
Limit value type:	PNEC sediment, freshwater ( TITANIUM DIOXIDE ; CAS No. : 13463-67-7 )
Limit value:	1000 mg/kg
Safety factor:	100

Limit value type:	PNEC sediment, marine water ( TITANIUM DIOXIDE ; CAS No. : 13463-67-7 )
Limit value:	100 mg/kg
Safety factor:	1000
Limit value type:	PNEC soil, freshwater ( TITANIUM DIOXIDE ; CAS No. : 13463-67-7 )
Limit value:	100 mg/kg
Safety factor:	10
Limit value type:	PNEC sewage treatment plant (STP) ( TITANIUM DIOXIDE ; CAS No. : 13463-67-7 )
Limit value:	100 mg/l
Safety factor:	10
Limit value type:	PNEC aquatic, freshwater ( TRIETHYLAMINE ; CAS No. : 121-44-8 )
Limit value:	0,11 mg/l
Safety factor:	10
Limit value type:	PNEC aquatic, intermittent release ( TRIETHYLAMINE ; CAS No. : 121-44-8 )
Limit value:	0,08 mg/l
Safety factor:	100
Limit value type:	PNEC aquatic, marine water ( TRIETHYLAMINE ; CAS No. : 121-44-8 )
Limit value:	0,011 mg/l
Safety factor:	100
Limit value type:	PNEC sediment, freshwater ( TRIETHYLAMINE ; CAS No. : 121-44-8 )
Limit value:	1575 mg/kg
Limit value type:	PNEC sediment, marine water ( TRIETHYLAMINE ; CAS No. : 121-44-8 )
Limit value:	0,158 mg/kg
Limit value type:	PNEC sewage treatment plant (STP) ( TRIETHYLAMINE ; CAS No. : 121-44-8 )
Limit value:	100 mg/l
Safety factor:	10
Limit value type:	PNEC aquatic, freshwater ( NEODECANOIC ACID, COBALT SALT ; CAS No. : 27253-31-2 )
Exposure route:	Water (Including sewage plant)
Limit value:	0,6 µg/l
Safety factor:	3
Limit value type:	PNEC aquatic, marine water ( NEODECANOIC ACID, COBALT SALT ; CAS No. : 27253-31-2 )
Exposure route:	Water (Including sewage plant)
Limit value:	2,36 µg/l
Safety factor:	3
Limit value type:	PNEC sediment, freshwater ( NEODECANOIC ACID, COBALT SALT ; CAS No. : 27253-31-2 )
Exposure route:	Water (Including sewage plant)
Limit value:	9,5 mg/kg
Safety factor:	3
Limit value type:	PNEC sediment, marine water ( NEODECANOIC ACID, COBALT SALT ; CAS No. : 27253-31-2 )
Exposure route:	Water (Including sewage plant)
Limit value:	9,5 mg/kg
Safety factor:	3
Limit value type:	PNEC soil, freshwater ( NEODECANOIC ACID, COBALT SALT ; CAS No. : 27253-31-2 )
Limit value:	10,9 mg/kg
Safety factor:	2
Limit value type:	PNEC sewage treatment plant (STP) ( NEODECANOIC ACID, COBALT SALT ; CAS No. : 27253-31-2 )
Exposure route:	Water (Including sewage plant)
Limit value:	0,37 mg/l
Safety factor:	10

**8.2 Exposure controls**

### Appropriate engineering controls

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Provide for sufficient ventilation. This can be achieved by local exhaust or general exhaust air collection. Wear a suitable respirator if the ventilation is not sufficient to keep the solvent vapour concentration below the occupational limit values.

### Personal protection equipment

Users are advised to consider national Occupational Exposure Limits or other equivalent values.

#### Eye/face protection

##### Suitable eye protection.

Use tightly fitting safety glasses.

#### Skin protection

Personal should wear antistatic clothings made of natural fiber or of high temperature resistant synthetic fiber. All parts of the body should be washed after contact.

#### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Wear suitable gloves tested to EN374. Use skin cleaning and skin care products after using the gloves. Breakthrough time (maximum wearing time) Check protective gloves before each use concerning their normal condition.

**Suitable gloves type** : Disposable gloves.

**Suitable material** : NR (natural rubber, natural latex)

**Required properties** : liquid-tight.

**Breakthrough time (maximum wearing time)** : > 60 min

**Thickness of the glove material** : > 0,5 mm

**Recommended glove articles** : DIN EN 374

#### Body protection

**Suitable protective clothing** : Overall

**Recommended material** : Natural fibres (e.g. cotton)

### Consumer exposure controls

#### Measures related to consumer uses of the substance (as such or in preparations)

Do not allow to enter ground-water, surface water or drains, even not in small quantities.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**Appearance** : liquid

#### Safety relevant basis data

<b>Physical state</b> :		liquid
<b>Solidifying point</b> :	( 1013 hPa )	°C
<b>Melting point/melting range</b> :	( 1013 hPa )	°C
<b>Freezing point</b> :		°C
<b>Decomposition temperature</b> :	( 1013 hPa )	°C
<b>Flash point</b> :	>	100 °C
<b>Ignition temperature</b> :		°C
<b>Lower explosion limit</b> :		Vol-%
<b>Upper explosion limit</b> :		Vol-%
<b>Relative density</b> :	( 20 °C )	(Water = 1)
<b>Water solubility</b> :	( 20 °C )	soluble
<b>Fat solubility</b> :	( 20 °C )	Wt %
<b>pH value</b> :	ca.	8,5
<b>Log P O/W</b> :		
<b>Odour threshold</b> :		mg/m <sup>3</sup>

<b>Evaporation rate :</b>			(Ether = 1)
<b>Certificate number :</b>			
<b>Odour :</b>			
<b>Density :</b>	( 20 °C )	1,26	g/cm <sup>3</sup>
<b>Flow time :</b>	( 20 °C )	s	DIN-cup 4 mm
<b>Flow time :</b>	( 20 °C )	s	ISO cup 4 mm
<b>Flow time :</b>	( 20 °C )	s	ISO cup 6 mm
<b>Viscosity :</b>	( 20 °C )	mPa.s	NEN-ISO 2884
<b>Viscosity :</b>	( 20 °C )	7 - 9	dPa.s Rotothinner

## 9.2 Other information

None

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No information available.

### 10.2 Chemical stability

Stable under recommended storage and handling conditions(See section 7).

### 10.3 Possibility of hazardous reactions

Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

### 10.4 Conditions to avoid

When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

### 10.5 Incompatible materials

No information available.

### 10.6 Hazardous decomposition products

Carbon monoxide. Carbon dioxide (CO<sub>2</sub>); Nitrogen

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute effects

##### Acute oral toxicity

Parameter :	LD50 ( TITANIUM DIOXIDE ; CAS No. : 13463-67-7 )
Exposure route :	Oral
Species :	Mouse
Effective dose :	> 5000 mg/kg
Parameter :	LD50 ( TRIETHYLAMINE ; CAS No. : 121-44-8 )
Exposure route :	Oral
Species :	Rat
Effective dose :	460 mg/kg
Parameter :	LD50 ( NEODECANOIC ACID, COBALT SALT ; CAS No. : 27253-31-2 )
Exposure route :	Oral
Species :	Rat
Effective dose :	1098 mg/kg

##### Acute dermal toxicity

Parameter :	LD50 ( TRIETHYLAMINE ; CAS No. : 121-44-8 )
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	570 mg/kg
Parameter :	LD50 ( NEODECANOIC ACID, COBALT SALT ; CAS No. : 27253-31-2 )

Exposure route : Dermal  
Species : Rat  
Effective dose : > 2000 mg/kg

**Acute inhalation toxicity**

Parameter : LC50 ( TITANIUM DIOXIDE ; CAS No. : 13463-67-7 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : > 6,82 mg/l  
Exposure time : 4 h  
Parameter : LC50 ( TRIETHYLAMINE ; CAS No. : 121-44-8 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : 3496 ppm  
Exposure time : 1 h

**SECTION 12: Ecological information**

Use appropriate container to avoid environmental contamination. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Contaminated packaging must be emptied of all residues and, following appropriate cleaning, may be sent to a recycling plant. Uncleaned packaging must be disposed of in the same manner as the medium.

**12.1 Toxicity**

**Aquatic toxicity**

**Acute (short-term) fish toxicity**

Parameter : EC50 ( TITANIUM DIOXIDE ; CAS No. : 13463-67-7 )  
Species : Brachydanio rerio (zebra-fish)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : > 100 mg/l  
Exposure time : 96 h  
Parameter : EC50 ( TITANIUM DIOXIDE ; CAS No. : 13463-67-7 )  
Species : Carassius auratus (goldfish)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : > 1000 mg/l  
Exposure time : 24 h  
Parameter : LC50 ( TRIETHYLAMINE ; CAS No. : 121-44-8 )  
Species : Oncorhynchus mykiss (Rainbow trout)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 38 mg/l  
Exposure time : 96 h

**Chronic (long-term) fish toxicity**

Parameter : LOEC ( TRIETHYLAMINE ; CAS No. : 121-44-8 )  
Species : Brachydanio rerio (zebra-fish)  
Evaluation parameter : Chronic (long-term) fish toxicity  
Effective dose : 320 mg/l  
Exposure time : 168 h

**Chronic (long-term) daphnia toxicity**

Parameter : NOEC ( TRIETHYLAMINE ; CAS No. : 121-44-8 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : 11 mg/l  
Exposure time : 1 month

**Acute (short-term) algae toxicity**

Parameter : Acute (short-term) algae toxicity ( TRIETHYLAMINE ; CAS No. : 121-44-8 )



Species :	Scenedesmus quadricauda
Evaluation parameter :	Acute (short-term) algae toxicity
Effective dose :	1000 µg/l
Exposure time :	96 h

#### **12.2 Persistence and degradability**

No information available.

#### **12.3 Bioaccumulative potential**

No information available.

#### **12.4 Mobility in soil**

No information available.

#### **12.5 Results of PBT and vPvB assessment**

No information available.

#### **12.6 Other adverse effects**

No information available.

#### **12.7 Additional ecotoxicological information**

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive and is not classified as dangerous for the environment.

### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Contaminated packaging must be emptied of all residues and, following appropriate cleaning, may be sent to a recycling plant. Uncleaned packaging must be disposed of in the same manner as the medium.

### **SECTION 14: Transport information**

#### **14.1 UN number**

No dangerous goods in sense of this transport regulation.

#### **14.2 UN proper shipping name**

No dangerous goods in sense of this transport regulation.

#### **14.3 Transport hazard class(es)**

No dangerous goods in sense of this transport regulation.

#### **14.4 Packing group**

No dangerous goods in sense of this transport regulation.

#### **14.5 Environmental hazards**

No dangerous goods in sense of this transport regulation.

#### **14.6 Special precautions for user**

None

### **SECTION 15: Regulatory information**

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

##### **EU legislation**

EU limit value for this product (cat. A/d): 130 g/l VOC.

##### **Other regulations (EU)**

**Information according to 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)**

VOC-value: 13 g/l

**National regulations**

GEEN / ZEER WEINIG OPLOSMIDDEL. VOLDOET VOOR PROFESSIONEEL GEBRUIK BINNEN AAN ARBO.

**15.2 Chemical Safety Assessment**

No information available.

**SECTION 16: Other information**

**16.1 Indication of changes**

02. Classification of the substance or mixture · 02. Labelling according to Regulation (EC) No. 1272/2008 [CLP] · 02. Special rules for supplemental label elements for certain mixtures · 02. Labelling (67/548/EEC or 1999/45/EC) · 02. Labelling (67/548/EEC or 1999/45/EC) - Hazard components for labelling · 02. Special provisions concerning the labelling of certain mixtures · 03. Hazardous ingredients

**16.2 Abbreviations and acronyms**

a.i. = Active ingredient  
ACGIH = American Conference of Governmental Industrial Hygienists (US)  
ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road  
AFFF = Aqueous Film Forming Foam  
AISE = International Association for Soaps, Detergents and Maintenance Products (joint project of AISE and CEFIC)  
AOAC = AOAC International (formerly Association of Official Analytical Chemists)  
aq. = Aqueous  
ASTM = American Society of Testing and Materials (US)  
atm = Atmosphere(s)  
B.V. = Beperkt Vennootschap (Limited)  
BCF = Bioconcentration Factor  
bp = Boiling point at stated pressure  
bw = Body weight  
ca = (Circa) about  
CAS No = Chemical Abstracts Service Number (see ACS - American Chemical Society)  
CEFIC = European Chemical Industry Council (established 1972)  
CIPAC = Collaborative International Pesticides Analytical Council  
CLP = REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.  
Conc = Concentration  
cP = CentiPoise  
cSt = Centistokes  
d = Day(s)  
DIN = Deutsches Institut für Normung e. V.  
DNEL = Derived No-Effect Level  
DT50 = Time for 50% loss; half-life  
EbC50 = Median effective concentration (biomass, e.g. of algae)  
EC = European Community; European Commission  
EC50 = Median effective concentration  
EINECS = European Inventory of Existing Commercial Chemical Substances (EU, outdated, now replaced by EC Number)  
ELINCS = European List of Notified (New) Chemicals (see Tab 7, Background - Guide)  
ErC50 = Median effective concentration (growth rate, e.g. of algae)  
EU = European Union  
EWC = European Waste Catalogue  
FAO = Food and Agriculture Organization (United Nations)  
GIFAP = Groupement International des Associations Nationales de Fabricants de Produits Agrochimiques (now CropLife International)  
h = Hour(s)  
hPa = HectoPascal (unit of pressure)  
IARC = International Agency for Research on Cancer  
IATA = International Air Transport Association  
IC50 = Concentration that produces 50% inhibition  
IMDG Code = International Maritime Dangerous Goods Code

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IMO = International Maritime Organization  
ISO = International Organization for Standardization  
IUCLID = International Uniform Chemical Information Database  
IUPAC = International Union of Pure and Applied Chemistry  
kg = Kilogram  
Kow = Distribution coefficient between n-octanol and water  
kPa = KiloPascal (unit of pressure)  
LC50 = Concentration required to kill 50% of test organisms  
LD50 = Dose required to kill 50% of test organisms  
LEL = Lower Explosive Limit/Lower Explosion Limit  
LOAEL = Lowest observed adverse effect level  
mg = Milligram  
min = Minute(s)  
ml = Milliliter  
mmHg = Pressure equivalent to 1 mm of mercury (133.3 Pa)  
mp = Melting point  
MRL = Maximum Residue Limit  
MSDS = Material Safety Data Sheet  
n.o.s. = Not Otherwise Specified  
NIOSH = National Institute for Occupational Safety and Health (US)  
NOAEL = No Observed Adverse Effect Level  
NOEC = No observed effect concentration  
NOEL = No Observable Effect Level  
NOx = Oxides of Nitrogen  
OECD = Organization for Economic Cooperation and Development  
OEL = Occupational Exposure Limits  
Pa = Pascal (unit of pressure)  
PBT = Persistent, Bioaccumulative or Toxic  
pH = -log<sub>10</sub> hydrogen ion concentration  
pKa = -log<sub>10</sub> acid dissociation constant  
PNEC = Previsible Non Effect Concentration  
POPs = Persistent Organic Pollutants  
ppb = Parts per billion  
PPE = Personal Protection Equipment  
ppm = Parts per million  
ppt = Parts per trillion  
PVC = Polyvinyl Chloride  
QSAR = Quantitative Structure-Activity Relationship  
REACH = Registration, Evaluation and Authorization of Chemicals (EU, see NCP)  
SI = International System of Units  
STEL = Short-Term Exposure Limit  
tech. = Technical grade  
TSCA = Toxic Substances Control Act (US)  
TWA = Time-Weighted Average  
vPvB = Very Persistent and Very Bioaccumulative  
WHO = World Health Organization = OMS  
y = Year(s)

### 16.3 Key literature references and sources for data

None

### 16.5 Relevant H- and EUH-phrases (Number and full text)

None

### 16.6 Training advice

None

### 16.7 Additional information

None

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# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)



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The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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