

2.2 Label elements

Symbol(s) of Product



Signal Word

Warning

Named Chemicals on Label

titanium dioxide

HAZARD STATEMENTS

STOT, repeated exposure, category 2 H373 May cause damage to organs through prolonged or repeated exposure.

PRECAUTION PHRASES

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P314 Get medical advice/attention if you feel unwell.

2.3 Other hazards

Not applicable

Results of PBT and vPvB assessment

No information

3. Composition/Information On Ingredients

3.2 Mixtures

Hazardous Ingredients

<u>CAS-No.</u>	<u>EINEC No.</u>	<u>Name According to EEC</u>	<u>%</u>	<u>R-Phrases</u>
13463-67-7		titanium dioxide	10-25	

<u>CAS-No.</u>	<u>REACH Reg No.</u>	<u>CLP Symbols</u>	<u>CLP Hazard Statements</u>	<u>M-Factors</u>
13463-67-7	01-2119489379-17-0117	GHS07-GHS08	H335-373-413	

Additional Information: The text for CLP Hazard Statements shown above (if any) is given in Section 16.

4. First-aid Measures

4.1 Description of First Aid Measures

GENERAL NOTES: No Information**AFTER INHALATION:** Move to fresh air. Consult a physician after significant exposure.**AFTER SKIN CONTACT:** Use a mild soap if available. Wash off with soap and plenty of water.**AFTER EYE CONTACT:** Rinse thoroughly with plenty of water, also under the eyelids. Remove contact lenses. If eye irritation persists, consult a specialist.**AFTER INGESTION:** Gently wipe or rinse the inside of the mouth with water. Give small amounts of water to drink. Never give anything by mouth to an unconscious person.

Self protection of the first aider:

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Harmful by inhalation.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

5. Fire-fighting Measures**5.1 Extinguishing Media:**

Carbon Dioxide, Dry Chemical, Foam, Water Fog

FOR SAFETY REASONS NOT TO BE USED: Alcohol, Alcohol based solutions, any other media not listed above.

5.2 Special hazards arising from the substance or mixture

No Information

5.3 Advice for firefighters

None known. The product itself does not burn. In the event of fire, wear self-contained breathing apparatus. Water spray/Dry powder/Alcohol-resistant foam/Carbon dioxide (CO₂)/High volume water jet. None.

6. Accidental Release Measures**6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Avoid dust formation. Use personal protective equipment

6.2 Environmental precautions

No Information

6.3 Methods and material for containment and cleaning up

Pick up and transfer to properly labelled containers. No special environmental precautions required. After cleaning, flush away traces with water.

6.4 Reference to other sections

FURTHER INSTRUCTIONS: Please refer to EU disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

7. Handling and Storage**7.1 Precautions for safe handling**

Use only in area provided with appropriate exhaust ventilation. Provide sufficient air exchange and/or exhaust in work rooms. Wear personal protective equipment. Avoid dust formation. Protect from moisture. Wash hands before breaks and at the end of workday. Do not breathe dust. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: No Information

STORAGE CONDITIONS: Keep tightly closed in a dry and cool place.

7.3 Specific end use(s)

No specific advice for end use available.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (IR)

Name	%	LTEL ppm	STEL ppm	STEL mg/m3	LTEL mg/m3	OEL Note
titanium dioxide		10-25			4 10	

FURTHER ADVICE: Refer to the regulatory exposure limits for the workforce enforced in each country. Some components may not have been classified at the EU level under the dangerous substances and preparations regulation.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: Effective dust mask.

EYE PROTECTION: Safety glasses with side-shields.

HAND PROTECTION: Protective gloves. Long sleeved clothing. Remove and wash contaminated clothing before re-use.

OTHER PROTECTIVE EQUIPMENT: No Information

ENGINEERING CONTROLS: Ensure adequate ventilation, especially in confined areas.

Chemical Name:

titanium dioxide

EC No.:

CAS-No.:

13463-67-7

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							700 mg/kg/d
Inhalation			10					
Dermal								

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.127
Fresh water sediments	1000
Marine water	1
Marine sediments	100
Food chain	1667
Microorganisms in sewage treatment	100 mg/l
soil (agricultural)	100
Air	

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Pipe, Bar, Duct, Or Angle
Physical State	SOLID
Odor	None
Odor threshold	Not determined

pH	N/A
Melting point /freezing point (°C)	Not determined
Boiling point/range (°C)	N.D. - N.D.
Flash Point, (°C)	N/A
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	N/A - N/A
Vapour Pressure	N/A
Vapour density	N/A
Relative density	Not determined
Solubility in /Miscibility with water	Insoluble
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Viscosity	N/A
Explosive properties	Not determined
Oxidising properties	Not determined

9.2 Other information

VOC Content g/l:	0
Grams of VOC per liter of coating product as applied (mixture of Part A and Part B) per ASTM D2369 Method E.	
Specific Gravity (g/cm ³)	2.089

10. Stability and Reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4 Conditions to avoid

No Information

10.5 Incompatible materials

Do not store near acids. Strong oxidizing agents.

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50:**Inhalation LC50:**

Irritation:	No information available.
Corrosivity:	No information available.
Sensitization:	No information available.
Repeated dose toxicity:	No information available.
Carcinogenicity:	No information available.
Mutagenicity:	No information available.
Toxicity for reproduction:	No information available.
STOT-single exposure:	No information available.
STOT-repeated exposure:	No information available.
Aspiration hazard:	No information available.

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested. Data on individual components are tabulated below.

<u>CAS-No.</u>	<u>Name According to EEC</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>
13463-67-7	titanium dioxide	10000 mg/m3, oral (rat)		

Additional Information:

This product may contain Titanium Dioxide, which is listed by IARC as possibly carcinogenic to humans (Group 2B). This listing is based on inadequate evidence of carcinogenicity in humans and sufficient evidence in experimental animals. This classification is relevant when exposed to titanium dioxide in dust or powder form only, including cured product that is subject to sanding, grinding, cutting, or other surface preparation activities.

12 Ecological Information

12.1 Toxicity:	
EC50 48hr (Daphnia):	No information
IC50 72hr (Algae):	No information
LC50 96hr (fish):	No information
12.2 Persistence and degradability:	No information
12.3 Bioaccumulative potential:	No information
12.4 Mobility in soil:	No information
12.5 Results of PBT and vPvB assessment:	No information

12.6 Other adverse effects: No information

<u>CAS-No.</u>	<u>Name According to EEC</u>	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
13463-67-7	titanium dioxide	>100 mg/l (EC50, 48h, Daphnia magna OECD202)ation	No information	>1000 mg/l

13. Disposal Considerations

13.1 **WASTE TREATMENT METHODS:** If recycling is not practicable, dispose of in compliance with local regulations. Waste codes should be assigned by the user based on the application for which the product was used. Empty containers should be taken to an approved waste handling site for recycling or disposal.

European Waste Code: 010409

Packaging Waste Code: 150110

14. Transport Information

14.1 UN number

14.2 UN proper shipping name

Technical name

14.3 Transport hazard class(es) NONE

Subsidiary shipping hazard

14.4 Packing group

14.5 Environmental hazards

14.6 Special precautions for user Not applicable

EmS-No.:

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code Not applicable

15. Regulatory Information

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

National Regulations:

Denmark Product Registration Number:

Danish MAL Code:

Sweden Product Registration Number:

Norway Product Registration Number:

WGK Class:

Chemical Safety Assessment

15.2 No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16. Other Information

Text for CLP Hazard Statements shown in Section 3 describing each ingredient

H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H413	May cause long lasting harmful effects to aquatic life.

Reasons for revision

No Information

List of References:

This Safety Data Sheet was compiled with data and information from the following sources:

The Ariel Regulatory Database provided by the 3E Corporation in Copenhagen, Denmark
 ESIS (The European Chemical Substances Information System), provided by the European Commission
 Joint Research Centre in Ispra, Italy
 Annex VI of the EU Council Directive 67/548/EEC
 Council Directive 67/548/EEC - Annex I or EU Council Directive 1999/45/EC
 European Union (EC) Regulation No. 1272/2008 on the classification, labelling and packaging of
 substances and mixtures (CLP Regulation)
 EU Council Decision 2000/532/EC and its Annex entitled "List of Wastes"

Acronym & Abbreviation Key:

CLP	Classification, Labeling & Packaging Regulation
EC	European Commission
EU	European Union
US	United States
CAS	Chemical Abstract Service
EINECS	European Inventory of Existing Chemical Substances
REACH	Registration, Evaluation, Authorization of Chemicals Regulation
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
LTEL	Long term exposure limit
STEL	Short term exposure limit
OEL	Occupational exposure limit
ppm	Parts per million
mg/m ³	Milligrams per cubic meter
TLV	Threshold Limit Value
ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety & Health Administration
PEL	Permissible Exposure Limits
VOC	Volatile organic compounds
g/l	Grams per liter
mg/kg	Milligrams per kilogram
N/A	Not applicable
LD50	Lethal dose at 50%
LC50	Lethal concentration at 50%
EC50	Half maximal effective concentration
IC50	Half maximal inhibitory concentration
PBT	Persistent bioaccumulative toxic chemical
vPvB	Very persistent and very bioaccumulative
EEC	European Economic Community
ADR	International Transport of Dangerous Goods by Road
RID	International Transport of Dangerous Goods by Rail
UN	United Nations
IMDG	International Maritime Dangerous Goods Code

IATA	International Air Transport Association
MARPOL	International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978
IBC	International Bulk Container

For further information, please contact: Technical Services Department

The information on this sheet corresponds to our present knowledge. It is not a specification and it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product or where instructions and recommendations are not followed.

