

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

PRETIOX titanium dioxide (all types)

Verze3.0

Date of printing 06/21/2016

Revision date: 04/03/2014

1. Identification of the substance/mixture and the company/enterprise**1.1. Product identifier**

Trade name	: PRETIOX titanium dioxide (all types)
Substance name	: Titanium dioxide
	: 13463 – 67 – 7 : 236
	– 675 – 5 : 01 –
CAS EC No. REACH	2119489379 – 17 – 0013

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

Use of the substance or mixture: Industrial and professional (Painting materials, printing inks, chemical fibers, plastics, paper, glass, enamels, ceramic products)

Unrecommended uses : We haven't found any unadvised uses at this time.

1.3. Details of the supplier of the safety data sheet

Business	: Brenntag CR spol. s too
	Between Úvozy 1850
	CZ 193 00 Prague 9 - Horní Pojernice
Telephone	: 00420-283096457
Fax	: 00420-224915402
E-mail adress	: gabriel.noga@brenntag.cz
Responsible/issuing person	: 00420-283096111

1.4. Telephone number for emergencies

Telephone number for emergencies	: Toxicology Information Center
	On the battlefield 1
	128 21 Prague
	tel. 00420-224 919 293

2. Hazard identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008**

According to Regulation (EC) No. 1272/2008, it is not a dangerous substance or mixture.

Possible effects on life : See section 12 Ecological information.

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environment

No further information is available.

2.2. Marking elements

Marking according to Regulation (EC) No. 1272/2008

According to Regulation (EC) No. 1272/2008, it is not a dangerous substance or mixture.

2.3. Another danger

Results of PBT and vPvB assessment see point 12.5.

3. Composition/information on ingredients**3.1. Substances**

NO - dangerous components	Contents [%]
Titanium dioxide CAS: 13463-67-7 ES: 236-675-5 No. REACH: 01-2119489379-17-0013	<= 100

No dangerous additives according to Regulation (EC) No. 1272/2008.

4. First aid instructions**4.1. Description of first aid**

General instructions	: No special safety measures are necessary. Remove contaminated clothing immediately.
When inhaled	: Remove victim to fresh air. In case of persistent problems, call a doctor.
In contact with skin	: Rinse thoroughly with plenty of soapy water.
In contact with eyes	: Rinse thoroughly with plenty of water, including under the eyelids. Remove contact lenses. In case of persistent problems, call a doctor.
When ingested	: Rinse mouth and drink plenty of water. To persons in

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never give anything by mouth when unconscious. Do not induce vomiting. In case of persistent problems, call a doctor.

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

Symptoms : No further information available.

Effects : No further information available.

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

Treatment : Symptomatic treatment.
No further information is available.

5. Fire fighting measures**5.1. Hasiva**

Suitable extinguishing agents : Water jets, foam, powder or CO₂.
Unsuitable fire extinguishers : Full flow of water.

5.2. Special hazards arising from the substance or mixture

Specific firefighting hazards : Hazardous decomposition products may be formed in case of fire such as: Carbon monoxide, Carbon dioxide (CO₂).
It can form an explosive mixture with air.

5.3. Instructions for firefighters

Special protective equipment for firefighters : Use self-contained breathing apparatus in case of fire. Use appropriate protective equipment (complete protective clothing).
More information : In case of fire and/or explosion, do not inhale gaseous emissions. Keep personnel out of reach and upwind. Forms slippery/greasy layers with water - danger of slipping.

6. Accidental release measures**6.1. Personal protection measures, protective equipment and emergency procedures**

Personal protection measures : Use suitable protective equipment. Ensure good ventilation. Do not leave near sources of heat and fire.
Avoid contact with skin and eyes. Avoid dust generation.
Personal protection see section 8.

6.2. Environmental protection measures

Environmental protection measures : see section 12.
Prevent entry into soil, drains and waterways.

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In case of leakage, inform the relevant authorities.

6.3. Methods and material for containment and cleaning up

Methods and material for containment and cleaning up : Ensure good ventilation. Collect using absorbent materials. Collect and transfer to properly labeled containers. Pick up with industrial vacuum cleaners. Prevent dust generation, spreading and swirling.

More information : Process the collected material in the manner indicated in the "Waste disposal" section.

6.4. Link to other sections

Personal protection see section 8.

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

Instructions for safe handling : Keep the container tightly closed. Avoid generation, swirling and accumulation of dust. Follow the safety regulations for handling chemicals.

Hygiene measures : Smoking, eating and drinking should be prohibited in the place of use. Wash your hands before a work break and after finishing work. Remove contaminated clothing immediately. Avoid contact with skin and eyes. Do not breathe dust, vapors or mist.

7.2. Conditions for safe storage of substances and mixtures, including incompatible substances and mixtures

Requirements for storage areas and containers : Store away from strong oxidizing agents.

Instructions for protection against fire and explosion : Standard measure. Prevent the formation of an electrostatic charge. It can form an explosive mixture with air.

More information on storage conditions : Store tightly closed in a cool, dry place. Protect from direct sunlight. Protect from heat. Store in a well-ventilated place. Store in closed warehouses. Avoid dust generation. Protect from frost.

Instructions for joint storage : Does not react with oxidizing agents.

7.3. Specific end/specific end uses

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Specific (specific) uses : No information available.

8. Limitation of exposure / personal protective equipment**8.1. Control parameters****Other Exposure limit values**

More information : Dust limit values generally apply to dusty substances.

CZ OEL, Permissible exposure limits, Dust in air 10 mg/m³CZ OEL, Permissible exposure limits, Dust in air 2.0 mg/m³CZ OEL, Permissible exposure limits, Total dust. 10 mg/m³CZ OEL, Permissible exposure limits, Total dust. 10 mg/m³For liquid substances with a solid content, dust applies after drying the carrier.
PNEC freshwater 0.127 mg/l

PNEC seawater 1 mg/l

PNEC freshwater sediment 1000
mg/kgPNEC sediment in seawater 100 mg/
kgPNEC soil
100 mg/kgMammalian PNEC,
oral 1667 mg/kg

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8.2. Limiting exposure

Technical measures

Reference is made to sections 7 and 8 on personal protective equipment.

Personal protective equipment

Respiratory protection

Recommendation : In case of increased dust concentration, use a breathing mask with a dust filter.

Hand protection

Recommendation : Use impermeable gloves when filling that comply with the EN 374 standard.

Eye protection

Recommendation : Tight-fitting safety glasses are recommended when filling.

Skin and body protection

Recommendation : Work protective clothing.

Limiting environmental exposure

General instructions : It is necessary to exclude the formation of dust, aerosol, fog.
Prevent entry into soil, drains and water sources and streams.

9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Form	: Powder.
Color	: White.
The smell	: Odorless.
Odor threshold value	: Date not given.
pH	: Date not given.
Melting point/range	: > 1560 °C

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Bod varu	: Approx. 3000 °C
Point of ignition	: Date not given.
Evaporation rate	: Date not given.
Flammability (solids, gases)	: Non-flammable substance.
Upper explosive limit	: Date not given.
Lower explosive limit	: Date not given.
Vapor tension	: Date not given.
Relative vapor density	: Date not given.
Relative density	: 3900 – 4260 kg/m ³ at 20 °C
Solubility in water	: < 1 µg/l
Partition coefficient: n-octanol/ water	: Date not given.
Ignition temperature	: Date not given.
Thermal decomposition	: Date not given.
Dynamic viscosity	: Date not given.
Explosive properties	: The substance has no explosive properties.
Explosiveness	: Date not given.
Oxidizing properties	: Date not given.
Bulk density	: 500 – 1040 kg/m ³

9.2. More information

Shaken density	: 780 – 1200 kg/m ³
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10. Stability and reactivity**10.1. Reactive**

Recommendation	: No information available.
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10.2. Chemical stability

Recommendation : When observing the specified method of storage and use
no decomposition occurs.
No further information is available.

10.3. Possibility of hazardous reactions

Hazardous reactions : Date not given.

10.4. Conditions to avoid

Conditions to avoid : Heat, moisture, flames and sparks. The product must not freeze.

10.5. Incompatible materials

Materials to avoid : Strong oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products : In case of fire: Carbon oxides.

11. Toxicological information**11.1. Information on toxicological effects****Acute toxicity****Orally**

LD50 : > 5000 mg/kg

Inhalation

LC50 : > 6,82 mg/l

Irritability**Skin**

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Result	: May irritate the skin.
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Eyes

Result	: May irritate eyes.
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Sensitization

Result	: No known sensitizing effect.
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More information

Additional information on toxicity	: Follow the safety regulations for handling chemicals.
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Human exposure experience	: No health damage known or expected under normal use.
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12. Environmental Information**12.1. Toxicity**

Acute toxicity

Fish

LC50	: > 1000 mg/l/96 h (big-headed buck) > 100 mg/l/96 h (rainbow trout) > 1 mg/l/14 days (rainbow trout) > 10 mg/l/48 h (striped danio) > 10000 mg/l/96 h (diamond coat)
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Aquatic invertebrates

EC50	: > 1000 mg/l/48 h (pearl)
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12.2. Persistence and degradability

Persistence and degradability

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Persistence

Result : The product is not persistent.

Biodegradability

Result : Readily biodegradable.

12.3. Bioaccumulative potential**Bioaccumulation**

Result : Not expected.

12.4. Mobility in soil

The product is not mobile in soil.

12.5. Results of PBT and vPvB assessment

Not classified as PBT and/or vPvB.

12.6. Other adverse effects**Adsorbed organically bound halogens (AOX)**

Result : data not given

Additional ecological information

Chemical oxygen consumption	Easily biodegradable.
Biochemical oxygen consumption	Long-term adverse effects on aquatic organisms are not expected.

13. Disposal Instructions

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13.1. Waste management methods

Product	<p>: Prevent the generation of waste or, if possible, ensure the minimization of waste. Untreated waste cannot be stored. Prevent waste from escaping into the environment (sewerage, water sources, etc.). Use personal protective equipment. This material and its packaging must be disposed of in a safe manner.</p> <p>Recycling, incineration. As for the packaging, it is returnable packaging that is not removed at the customer's place. Removal of the preparation in accordance with the Waste Act by an authorized person. This is hazardous waste.</p> <p>Act No. 185/2001 Coll., on waste, as amended</p> <p>Decree of the Ministry of the Environment No. 381/2001 Coll., which establishes the Catalog of waste, List of hazardous waste and lists of waste and states for purposes of export, import and transit of waste and procedure for granting consent to export, import and transit of waste (Waste Catalogue), as amended by Decree No. 503/2004 Coll., Decree No. 168/2007 Coll. and decree no. 374/2008 Sb.</p> <p>Decree of the Ministry of the Environment No. 383/2001 Coll., on the details of waste management, as amended by Decree No. 41/2005 Coll., Decree No. 294/2005 Coll., Decree No. 353/2005 Coll. and Decree No. 351/2008 Coll.</p>
Contaminated packaging	<p>: Handle contaminated packaging professionally. Packaging can be recycled after thorough and careful cleaning. Packaging that could not be cleaned must be handled in the same way as the product. Do not burn or cut empty containers with a torch.</p> <p>Danger of explosion.</p>
Number from the European waste catalog	<p>: No code from the European Waste Catalog can be assigned to this product, as its assignment is determined by the intended use. The waste code was established in consultation with the local authorities responsible for waste disposal.</p>

14. Shipping Information

Not dangerous goods for ADR, RID and IMG

14.1. UN number

not applicable

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14.2. UN proper shipping name

not applicable

14.3. Transport hazard class(es).

not applicable

14.4. Packaging group

not applicable

14.5. Danger to the environment

not applicable

14.6. Special safety measures for users

not applicable

14.7. Bulk transport according to Annex II of MARPOL 73/78 and the IBC regulation

IMDG : not applicable

15. Regulatory Information**15.1. Safety, health and environmental regulations/specific legislation relating to a substance or mixture**

Other regulations The final classification of waste is carried out by its originator according to the characteristics of the waste in at the time of its creation according to the Decree of the Ministry of the Interior as amended.; 350/2011 LAW of 27 October 2011 on chemical substances and chemical mixtures and on the amendment of certain laws (chemical law) with effect from 1 January 2012

Directive (EC) No. 1272/2008 on the classification, labeling and packaging of substances and mixtures, on the amendment and repeal of Directives 67/548/EEC and 1999/45/EC and on the amendment of Regulation (EC) No. 1907/2006, as amended .

1) Council Directive 67/548/EEC on the convergence of legal and administrative regulations relating to the classification, packaging and labeling of dangerous substances, as amended.

Directive 1999/45/EC of the European Parliament and of the Council on the approximation of the legal and administrative regulations of the Member States relating to the classification, packaging and labeling of dangerous preparations, as amended.

Directive 2004/9/EC of the European Parliament and of the Council of 11 February 2004 on the inspection and verification of good laboratory practice.

Directive 2004/10/EC of the European Parliament and of the Council of 11 February 2004 on the harmonization of laws and regulations relating to the application of the principles of good laboratory practice and the verification of their use in the testing of chemical substances.

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2) Regulation of the European Parliament and of the Council (EC) No. 1907/2006 of 18 December 2006 on the registration, evaluation, authorization and restriction of chemical substances, on the establishment of the European Chemicals Agency, on the amendment of Directive 1999/45/EC and on its repeal Council Regulation (EEC) No. 793/93, Commission Regulation (EC) No. 1488/94, Council Directive 76/796/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended.

Regulation of the European Parliament and of the Council (EC) No. 689/2008 of 17 June 2008 on the export and import of hazardous chemical substances.

Regulation of the European Parliament and of the Council (EC) No. 648/2004 of March 31, 2004 on detergents, as amended.

Regulation of the European Parliament and Council (EC) No. 850/2004 of April 29, 2004 on persistent organic pollutants and amending Directive 79/117/EEC, as amended.

Regulation of the European Parliament and of the Council (EC) No. 1272/2008 of 16 December 2008 on the classification, labeling and packaging of substances and mixtures, on the amendment and repeal of Directives 67/548/EEC and 1999/45/EC and on the amendment of the Regulation (EC) No. 1907/2006, as amended.

Regulation (EC) No. 1102/2008 of the European Parliament and of the Council of 22 October 2008 on the ban on the export of metallic mercury and certain compounds and mixtures of mercury and on the safe storage of metallic mercury.

Commission Regulation (EC) No. 440/2008 of 30 May 2008 laying down test methods pursuant to Regulation (EC) No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemical Substances, as amended.

Commission Regulation (EC) No. 340/2008 of 16 April 2008 on fees and payments to the European Chemicals Agency pursuant to Regulation (EC) No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

3) Art. 2 paragraph 7 of Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on the classification, labeling and packaging of substances and mixtures, on the amendment and repeal of Directives 67/548/EEC and 1999/45/EC and amending Regulation (EC) No. 1907/2006, as amended.

4) Art. 2 paragraph 8 of Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on the classification, labeling and packaging of substances and mixtures, on the amendment and repeal of Directives 67/548/EEC and 1999/45/EC and amending Regulation (EC) No. 1907/2006, as amended.

5) Act No. 326/2004 Coll., on phytosanitary care and amendment of some related laws, as amended. Regulation of the European Parliament and the Council (EC) No. 1107/2009 of 21 October 2009 on the placing of plant protection products on the market and the repeal of Council Directives 79/117/EEC and 91/414/EEC.

6) Act No. 120/2002 Coll., on the conditions for placing biocidal products and active substances on the market and on the amendment of some related laws, as amended.

7) Art. 61 Regulation of the European Parliament and Council (EC) No. 1272/2008 of 16 December 2008 on the classification, labeling and packaging of substances and mixtures, on the amendment and repeal of Directives 67/548/EEC and 1999/45/EC and on the amendment of the Regulation (EC) No. 1907/2006, as amended.

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- 8) Act No. 123/2000 Coll., on medical devices and on the amendment of some related laws, as amended.
- 9) Table 3.2. part 3 of Annex VI of Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on the classification, labeling and packaging of substances and mixtures, on the amendment and repeal of Directives 67/548/EEC and 1999/45/EC and amending Regulation (EC) No. 1907/2006, as amended.
- 10) Commission Regulation (EC) No. 440/2008 of May 30, 2008, establishing test methods according to Regulation (EC) No. 1907/2006 of the European Parliament and of the Council on the registration, evaluation, authorization and restriction of chemical substances, in valid wording.
- 11) Act No. 22/1997 Coll., on technical requirements for products and on the amendment and addition of certain laws, as amended.
Government Regulation No. 194/2001 Coll., establishing technical requirements for aerosol sprayers, as amended.
- 12) Act No. 634/1992 Coll., on consumer protection, as amended.
- 13) Act No. 266/1994 Coll., on railways, as amended. Convention on International Carriage (COTIF), promulgated under No. 8/1985 Coll., as amended.
- 14) For example, Act No. 111/1994 Coll., on road transport, as amended, European Agreement on the International Carriage of Dangerous Goods by Road (ADR), promulgated under No. 64/1987 Coll., as amended.
- 15) Act No. 114/1995 Coll., on inland navigation, as amended.
- 16) Decree No. 17/1966 Coll., on air transport regulations, as amended by Decree No. 15/1971 Coll.
- 17) Act No. 61/2000 Coll., on maritime navigation.
- 18) Government Regulation No. 361/2007 Coll., which establishes conditions for health protection at work, as amended by Government Regulation No. 68/2010 Coll.
- 19) Art. 31 Regulation of the European Parliament and of the Council (EC) No. 1907/2006 of 18 December 2006 on the registration, evaluation, authorization and restriction of chemical substances, on the establishment of the European Agency for Chemical Substances, on the amendment of Directive 1999/45/EC and on the repeal of the Regulation Council (EEC) No. 793/93, Commission Regulation (EC) No. 1488/94, Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended.
- 20) Regulation of the European Parliament and the Council (EC) No. 1907/2006 of 18 December 2006 on the registration, evaluation, authorization and restriction of chemical substances, on the establishment of the European Chemicals Agency, on the amendment of Directive 1999/45/EC and on the repeal Council Regulation (EEC) No. 793/93, Commission Regulation (EC) No. 1488/94, Council Directive 76/796/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended.
- 21) Regulation of the European Parliament and the Council (EC) No. 1272/2008 of 16 December 2008 on the classification, labeling and packaging of substances and mixtures, on the amendment and repeal of Directives 67/548/EEC and 1999/45/EC and on the amendment of the Regulation (EC) No. 1907/2006, as amended.
- 22) Annex II of the Decision of the OECD Council on the mutual recognition of data for the evaluation of chemical substances [C(81)30 in the final version] of 12 May 1981, as amended by the Decision of the OECD Council [C(97)186 in the final version] of

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26 November 1997. Annexes I and II of the Decision - OECD Council Recommendation on Compliance with the Principles of Good Laboratory Practice [C(89)87 final] of 2 October 1989, as amended by the OECD Council Decision [C(95)8 in final text] of 9 March 1995.

23) Art. 45 Regulation of the European Parliament and Council (EC) No. 1272/2008 of 16 December 2008 on the classification of labeling and packaging of substances and mixtures, on the amendment and repeal of Directives 67/548/EEC and 1999/45/EC and on the amendment of the Regulation (EC) No. 1907/2006, as amended.

24) Art. 9 paragraph 3 and Annex VII of Regulation (EC) No. 648/2004 of the European Parliament and of the Council of March 31, 2004 on detergents, as amended.

25) Regulation of the European Parliament and Council (EC) No. 850/2004 of April 29, 2004 on persistent organic pollutants and amending Directive 79/117/EEC, as amended.

26) Regulation of the European Parliament and the Council (EC) No. 689/2008 of 17 June 2008 on the export and import of hazardous chemical substances.

27) Regulation of the European Parliament and the Council (EC) No. 1102/2008 of 22 October 2008 on the ban on the export of metallic mercury and certain compounds and mixtures of mercury and on the safe storage of metallic mercury.

15.2. Chemical safety assessment

Date not given.

16. Further Information

Full text of R-phrases relating to paragraphs 2 and 3.

More information

More information

: The information given in this safety data sheet is to the best of our knowledge at the time of the review. The information only describes the product with regard to handling safety, it is not a quality specification, it does not establish the law. The information contained in this safety data sheet applies only to this material and may not be valid for this material used in combination with another material or in another process not described in the text.

|| The section has been redesigned.