1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product information

Trade name : AEROXIDE® TiO2 P 25

Company : Evonik Degussa GmbH
Inorganic Materials
Produktsicherheit IM-IM-PS
Postfach 1345
D-63403 Hanau

Telephone : +49 (0)6181 59-4787
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Email address : sds.asfp@evonik.com

Emergency telephone number : +49 (0)7623-919191

Use of the Substance / Preparation : Catalyst support
Stabilizer
UV-filters

2. HAZARDS IDENTIFICATION

Additional safety information for humans and the environment
On the basis of our data the product is not a hazardous substance as defined by the Chemicals Act or Hazardous Substance Ordinance in the currently valid versions.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Information on ingredients / Hazardous components

• Titanium dioxide
   CAS-No. 13463-67-7   EC-No. 236-675-5

See chapter 16 for text of risk phrases

4. FIRST AID MEASURES

Inhalation
In case product dust is released:
Possible discomfort: cough, sneezing
Move victims into fresh air.

Skin contact
Wash off with plenty of water and soap.

Eye contact
Possible discomfort is due to foreign substance effect.
Rinse thoroughly with plenty of water keeping eyelid open.
In case of persistent discomfort: Consult an ophthalmologist.
Ingestion
Clean mouth with water and drink afterwards plenty of water.
After absorbing large amounts of substance / In case of discomfort: Supply with medical care.

Notes to physician
No hazards which require special first aid measures.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
All extinguishing substances suitable.

Specific hazards during fire fighting
None known

Further information
Water used to extinguish fire should not enter drainage systems, soil or stretches of water. 
Ensure there are sufficient retaining facilities for water used to extinguish fire. 
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear personal protective equipment.

Environmental precautions
Do not allow entrance in sewage water, soil stretches of water, groundwater, drainage systems.

Methods for cleaning up
Sweep up or vacuum up spillage and collect in suitable container for disposal. 
Avoid dust formation.

7. HANDLING AND STORAGE

Handling
Safe handling advice
If necessary: Local ventilation.

Advice on protection against fire and explosion
Take precautionary measures against static discharges.

Storage
Requirements for storage areas and containers
Keep in a dry place.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Personal protective equipment

Respiratory protection
No special protective equipment required.
If dust occurs: Dust mask with P2 particle filter

Hand protection
Wear protective gloves made of the following materials: nitrile rubber (NBR), butyl rubber, PVC.
The material thickness and rupture time data do not apply to non-solute solids / dusts.

Eye protection
Safety glasses with side-shields
If dust occurs: basket-shaped glasses

Skin and body protection
No special protective equipment required.
preventive skin protection
Cleanse and apply cream to skin after work.

Hygiene measures
When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work.
Avoid contaminating clothes with product. Wash contaminated clothing after use.

Protective measures
Handle in accordance with good industrial hygiene and safety practices.
If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used.
If the limits at the workplace are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form  powder
Colour  white
Odour  odourless

Safety data
pH  3.5 - 4.5  (40 g / l)  (20 °C)
Melting point/range  ca. 1850 °C
Boiling point/range  not applicable
Flash point  not applicable
Flammability  not applicable
Ignition temperature  not applicable
Autoinflammability  not applicable
Lower explosion limit: not applicable
Upper explosion limit: not applicable
Minimum ignition energy: > 10 Joule
Vapour pressure: not applicable
Density: ca. 3.8 g/cm³ (20 °C)
Tapped density: ca. 130 g/l
Water solubility: insoluble
Partition coefficient (n-octanol/water): not applicable
Viscosity, dynamic: not applicable

10. STABILITY AND REACTIVITY
Hazardous decomposition products: None known
Thermal decomposition: > 2000 °C

11. TOXICOLOGICAL INFORMATION
Acute oral toxicity: LD50 Rat: > 10000 mg/kg
Method: literature (limit test)
Acute dermal toxicity: LD50 Rabbit: >= 10000 mg/kg
Method: literature
Skin irritation: Rabbit / literature
not irritating
Eye irritation: Rabbit / literature
not irritating
Sensitization: Optimizations-test guinea pig: not sensitizing
Method: literature
Patch test: not sensitizing
Method: literature
Gentoxicity in vitro: Microorganisms, cell cultures
Shown no mutagenic/genotoxic effect., literature
Gentoxicity in vivo: Microorganisms, cell cultures
Shown no mutagenic/genotoxic effect., literature
Carcinogenicity: Oral rat, mouse: 103 weeks
no evidence that cancer may be caused, literature.

Feeding experiments

inhalative Rat: 2 years
Method: literature
Increased incidence of lung tumors.

The scientific discussion of the tumorigenic effect of sparingly soluble inorganic particles (fine dusts)- such as titanium dioxide - is ongoing. It is the opinion of many inhalation toxicologists that the tumor formation observed in rats results from a species-specific mechanism involving overloading of the rat lung (overload phenomenon). Corresponding findings resulting from exposure of humans have not been observed to date. On the other hand, the International Agency for Research on Cancer (IARC) assessed, in February of 2006, the available rat model studies as constituting sufficient proof of the carcinogenicity of titanium dioxide in animal models. For humans, the IARC does not see sufficient evidence of a carcinogenic effect of titanium dioxide. However, the IARC evaluation scheme results in an overall assessment of titanium dioxide as “possibly carcinogenic to humans” (Group 2B).

inhalative (mouse): 2 years
no evidence that cancer may be caused, literature.

Human experience
Epidemiological studies to date have not revealed any evidence of a relation between exposure to titanium dioxide and diseases of the respiratory tract beyond general effects of dust.

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Behaviour in environmental compartments

Ecotoxicity effects

Toxicity to fish
LC50 Fundulus heteroclitus: > 1000 mg/l / 96 h
Method: literature

Toxicity to daphnia
EC0 Daphnia magna: 1000 mg/l / 48 h
Method: literature

Toxicity to bacteria
EC0 Pseudomonas fluorescens: 10000 mg/l / 24 h
Method: DEV, DIN 38412, T. 8 (modified).

13. DISPOSAL CONSIDERATIONS

Product
Disposal according to local authority regulations.

Uncleaned packaging
Offer rinsed packaging material to local recycling facilities.
Other countries: observe the national regulations.
Waste Key Number

No waste key number as per the European Waste Types List can be assigned to this product, since such classification is based on the (as yet undetermined) use to which the product is put by the consumer.
The waste key number must be determined as per the European Waste Types List (decision on EU Waste Types List 2000/532/EC) in cooperation with the disposal firm / producing firm / official authority.

14. TRANSPORT INFORMATION

Transport/further information
Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Labelling according to EC Directives

Other data
On the basis of our data the product is not a hazardous substance as defined by the Chemicals Act or Hazardous Substance Ordinance in the currently valid versions.

National legislation

16. OTHER INFORMATION

Risk phrase (R phrase) texts

Further information

Changes since the last version are highlighted in the margin. This version replaces all previous versions.
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.