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

### Product information

| | | |
|---|---|---|
| Trade name | : | AEROXIDE® TiO2 P 25 |
| Company | : | Evonik Degussa GmbH<br>Inorganic Materials<br>Produktsicherheit IM-IM-PS<br>Postfach 1345<br>D-63403 Hanau |
| Telephone | : | +49 (0)6181 59-4787 |
| Telefax | : | +49 (0)6181 59-4205 |
| Email address | : | sds.asfp@evonik.com |
| Emergency telephone number | : | +49 (0)7623-919191 |
| Use of the Substance / Preparation | : | Catalyst support<br>Stabilizer<br>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<br>Method: DIN 53 194 |
| 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<br>Method: literature<br>(limit test) |
| Acute dermal toxicity | LD50 Rabbit: >= 10000 mg/kg<br>Method: literature |
| Skin irritation | Rabbit / literature<br>not irritating |
| Eye irritation | Rabbit / literature<br>not irritating |
| Sensitization | Optimizations-test guinea pig: not sensitizing<br>Method: literature<br><br>Patch test : not sensitizing<br>Method: literature |
| Gentoxicity in vitro | Microorganisms, cell cultures<br>Shown no mutagenic/genotoxic effect., literature |
| Gentoxicity in vivo | Microorganisms, cell cultures<br>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 fluorencens: 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.