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Section 1: Identification of substance and of the company

1.1 Product identifier:

Substance name: DMT Titan(IV) oxide 4-8 nm
Synonym: -
EG-No: 236-675-5
CAS-No: 13463-67-7
REACH-No: -

1.2 Relevant identified uses of substance or mixture and uses advised against:

Relevant identified uses: Laboratory chemical, nano particle
Uses advised against: -

1.3 Details of the supplier of the safety data sheet:

Supplier: DMT GmbH & Co. KG
Address: Am Technologiepark 1
Nationality/Postcode/City: D-45307 Essen
Information Contact: testdust@dmt-group.com
Telephone / Fax / E-Mail: +49 201 172 1232 / +49 201 172 1262 / testdust@dmt-group.com

1.4 Emergency telephone number:

Germany: (0)-112

Section 2: Hazard identification

2.1 Classification of the substance or mixture:

-

2.2 Label elements:

Labelling according to Regulation (EG) No 1272/2008

Hazard statements: -
Precautionary statements: -

2.3 Supplemental hazard information:

-

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Section 3: Composition / Information of ingredients

3.1 Substance:

Substance name: Titan(IV) oxide
EG-No.: 236-675-5
CAS-No.: 13463-67-7

Section 4: First aid measures

4.1 Description of first aid measures:

| | |
|-------------------------------------|---|
| General information: | Take off contaminated clothing. |
| Following inhalation: | Remove dust source and provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice. |
| Following skin contact: | Wash with water and soap. |
| Following eye contact: | Rinse cautiously with water for several minutes. Contact lenses have to be removed. |
| Following ingestion: | Rinse mouth with water. |
| Self-protection of the first aider: | - |

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

-

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

| | |
|--------------------|-------------------|
| Notes for doctor: | Watch section 4.1 |
| Special treatment: | - |

Section 5: firefighting measures

5.1 Extinguishing media:

| | |
|---------------------------------|---|
| Suitable extinguishing media: | Co-ordinate fire-fighting measures to the fire surroundings. Water spray, foam, dry extinguishing powder, carbon dioxide |
| Unsuitable extinguishing media: | Water jet |

5.2 Special hazards arising from the substance or mixture:

| | |
|-----------------------------|-----------------|
| Hazard combusting products: | Non-combustible |
|-----------------------------|-----------------|

5.3 Advice for fire-fighters:

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

| | |
|------------------------------|------------------|
| For non-emergency personnel: | Watch section 8. |
|------------------------------|------------------|

| | |
|--------------------------|------------------|
| For emergency personnel: | Watch section 8. |
|--------------------------|------------------|

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6.2 Environment precautions:

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up:

For containment: Place in appropriate containers for disposal.

For cleaning up: Take up mechanically.

Other information: -

6.4 Reference to other sections:

For further protective measures, watch section 8.

Section 7: Handling and Storage

7.1 Precautions for safe handling:

Protective measures:

Advice on safe handling: Watch section 8.

Fire preventions: -

Aerosol and dust generation prevention: Avoid dust generation and deposit. Areas containing possible dust generation need to provide artificial ventilation.

Environment precautions: -

Advice on general occupational hygiene:

Wash hands before breaks and after work. Do not eat, drink and smoke in work areas

7.2 Conditions for safe storage conditions:

Technical measures and storage conditions:

Packaging materials: Use airtight containers.

Requirements for storage rooms and vessels:

Store in a dry place.

Hints on storage assembly:

Storage class: -

Material to avoid: -

Further information on storage conditions:

Use local and general ventilation.

7.3 Specific end uses:

Recommendations: -

Specific end uses: -

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Section 8: Exposure controls / personal protection

8.1 Control parameters:

Occupational exposure limits: Common dust exposure limit (valid in Germany) 1.5 mg/m³ (A; alveolar), 4 mg/m³ (E, inhalable).
Biological limit values: -

8.2 Exposure controls:

Appropriate engineering controls: Provide ventilation, avoid dust whirling.

Personal protective equipment:

Eye / Face protection: Use safety goggles with side protection.

Skin protection: Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

Respirable protection: Wear filtering face piece (FFP1 – FFP3).

Body protection: Wear overall.

Environment exposure controls: Keep away from drains, surface and ground water.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance: Powder
Physical state: Solid
Color: White
Odour : Odourless
Odour threshold : -
pH : -
Melting point / freezing point : 1855 °C
Initial boiling point / boiling range : 3000 °C
Flash point : -
Evaporation rate : -
Flammability (solid, gas) -
Upper / lower explosive limits : -
Vapour pressure : -
Vapour density : -
Relative density : 4.23 g/cm³
Solubility: -
Partition coefficient:
n-octanol / water -
Auto-ignition-temperature : -
Decomposing temperature : -
Viscosity : -
Explosive properties : -
Oxidizing properties : -

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Section 10: Stability and reactivity

10.1 Reactivity:

DMT Titan(IV) oxide 4-8 nm is not reactive under normal conditions.

10.2 Chemical stability:

Under regular use and storage is DMT Titan(IV) oxide 4-8 nm stable.

10.3 Possibility of hazardous reactions:

Violent reaction with: Potassium, Magnesium, Sodium, Strong oxidizer, Calcium
Danger of explosion: Lithium

10.4 Conditions to avoid:

-

10.5 Incompatible materials:

-

10.6 Hazard decomposition products:

-

Section 11: Toxicological information

11.1 Information of toxicological information:

Acute toxicity: Shall not be classified as acutely toxic.

Section 12: Ecological information

12.1 Toxicity:

No toxic impact known.

12.2 Persistence and degradability:

Not applicable for inorganic substances.

12.3 Bio accumulative potential:

Not applicable for inorganic substances.

12.4 Mobility on soil:

Due to low water solubility, substance shows minor mobility on common soils.

12.5 Results of PBT and vPVB assessment:

Not applicable for inorganic substances.

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12.6 Other adverse effects:

Not applicable.

Section 13: Disposal considerations

13.1 Waste treatment methods:

The disposal of DMT Titan(IV) oxide 4-8 nm and contaminated containers has to be proceeded according to local disposal regulations. Consult local disposal provider for exact directives.

Section 14: Transport information

DMT Titan(IV) oxide 4-8 nm is not a HAZMAT in terms of transport restrictions.

14.1 UN. No:

No labeling.

14.2 UN proper shipping name:

No labeling.

14.3 Transport hazard class(es):

Hazard label: No labeling.

14.4 Packing group:

No labeling.

14.5 Environment hazard:

No labeling.

14.6 Special precautions for user:

During transportation use impermeable containers to avoid dust whirling.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:

Not applicable.

Section 15: Regulatory information

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

DMT Titan(IV) oxide 4-8 nm is not a hazardous material, not a material according to European directive 96/82/EG ("SEVESO"), does not harm ozone layer and is not a hardly degradable pollutant. Additionally, observe any national regulations.

Safety Data Sheet
According to Regulation (EG) No 1907/2006



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Section 16: Other information

The entire safety data sheet is based on actual knowledge and experience. A juridical mandatory warranty of single properties cannot be provided. Employees must be instructed to handling bulk materials and dusting materials.
