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Section 1: Identification of substance and of the company

1.1 Product identifier:

Substance name: DMT Aluminum oxide < 40 nm
Synonym: -
EG-No: 215-691-6
CAS-No: 1344-28-1
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:

-

Section 3: Composition / Information of ingredients

3.1 Substance:

Substance name: Aluminum oxide
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CAS-No.: 1344-28-1

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
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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.
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For emergency personnel:	Watch section 8.
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6.2 Environment precautions:

Keep away from drains, surface and ground water.

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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:
Physical state: Solid
Color: Whitish
Odour : Odourless
Odour threshold : -
pH : -
Melting point / freezing point : 2050 °C
Initial boiling point / boiling range : 2980 °C
Flash point : -
Evaporation rate : -
Flammability (solid, gas) -
Upper / lower explosive limits : -
Vapour pressure : -
Vapour density : -
Relative density : 3.95
Solubility: Insoluble
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 Aluminum oxide < 40 nm is not reactive under normal conditions.

10.2 Chemical stability:

Under regular use and storage is DMT Aluminum oxide < 40 nm stable.

10.3 Possibility of hazardous reactions:

Exothermic reaction with: Fluorine, Ethylene oxide
Danger of explosion: Nitrate

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 Aluminum oxide < 40 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 Aluminum oxide < 40 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 Aluminum oxide < 40 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.
