

Created on: 06.07.2017

Edited on: 05.07.2018

Valid from: 01.03.2018

Version: March 2018

Previous version: October 2013

Page 1 of 7

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### **Section 1: Identification of substance and of the company**

#### **1.1 Product identifier:**

Substance name: DMT Copper(II) oxide 15-35 nm  
Synonym: -  
EG-No: 215-269-1  
CAS-No: 1317-38-0  
REACH-No: -  
Other names: -

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

Relevant identified uses: Laboratory chemical  
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

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### **Section 2: Hazard identification**

#### **2.1 Classification of the substance or mixture:**

Harmful to water.

#### **2.2 Label elements:**

Labelling according to Regulation (EG) No 1272/2008



**Signal word: Warning!**

Hazard statements:

H 410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P 260 Do not breathe dust.

P 273 Avoid release to the environment.

#### **2.3 Supplemental hazard information:**

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Created on: 06.07.2017

Edited on: 05.07.2018

Valid from: 01.03.2018

Version: March 2018

Previous version: October 2013

Page 2 of 7

---

### **Section 3: Composition / Information of ingredients**

#### **3.1 Substance:**

Substance name:	Copper(II) oxide
EG-No:	215-269-1
CAS-No:	1317-38-0

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### **Section 4: First aid measures**

#### **4.1 Description of first aid measures:**

General information:	Take off contaminated clothing.
Following inhalation:	Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.
Following skin contact:	Wash with soap and water.
Following ingestion:	Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.
Self-protection of the first aider:	Avoid dust whirling.

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

Conjunctival redness of the eyes, Diarrhoea, Vomiting, Irritation.

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

Notes for doctor: Please consider section 4.1

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### **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:**

Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

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### **Section 6: Accidental release measures**

#### **6.1 Personal precautions, protective equipment and emergency procedures:**

##### **For non-emergency personnel:**

Protective equipment: Please consider section 8.

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**Created on:** 06.07.2017

**Edited on:** 05.07.2018

**Valid from:** 01.03.2018

**Version:** March 2018

**Previous version:** October 2013

Page 3 of 7

Emergency procedures: Please consider section 8.

**For emergency personnel:**

Personal protective responders: Please consider section 8.

**6.2 Environment precautions:**

Avoid dust generation; do not remove the dust in canalization, surface or groundwater.

**6.3 Methods and material for containment and cleaning up:**

For containment: Covering of drains.

For cleaning up: Take up mechanically.

Other information: -

**6.4 Reference to other sections:**

Please consider section 8.

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**Section 7: Handling and Storage**

**7.1 Precautions for safe handling:**

**Protective measures:**

Advice on safe handling: -

Fire preventions: -

Aerosol and dust generation prevention: Avoid dust generation and –deposit; provide artificial ventilation.

Environment precautions: -

**Advice on general occupational hygiene:**

Wash hands before breaks and after work. Keep away food, drink and animal feedingstuffs.

**7.2 Conditions for safe storage conditions:**

**Technical measures and storage conditions:**

Packaging materials: Store in a dry place.

**Requirements for storage rooms and vessels:**

Store dry and impermeable. Use original container. Keep away from foods and drinks.

**Hints on storage assembly:**

Storage class: -

Material to avoid: -

**Further information on storage conditions:**

Use local and general ventilation.

**7.3 Specific end uses:**

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Created on: 06.07.2017

Edited on: 05.07.2018

Valid from: 01.03.2018

Version: March 2018

Previous version: October 2013

Page 4 of 7

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### **Section 8: Exposure controls / personal protection**

#### **8.1 Control parameters:**

Occupational exposure limits: 1,25 mg/m<sup>3</sup> (A; respirable), 10 mg/m<sup>3</sup> (E; inhalable) (Germany)  
Biological limit values: -

#### **8.2 Exposure controls:**

Eye / Face protection: Wear 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.

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### **Section 9: Physical and chemical properties**

#### **9.1 Information on basic physical and chemical properties:**

Appearance:  
Physical state: Solid  
Color: Dark grey  
Odour: Odourless  
Odour threshold: -  
pH: -  
Melting point / freezing point: 1326 °C  
Initial boiling point / boiling range: -  
Flash point: -  
Evaporation rate: -  
Flammability ( solid, gas) : -  
Upper / lower explosive limits: -  
Vapour pressure: -  
Vapour density: -  
Relative density: 6,32 g/cm<sup>3</sup>  
Solubility: Insoluble  
Partition coefficient:  
n-octanol / water: -  
Auto-ignition-temperature: -  
Decomposing temperature: -  
Viscosity: -  
Explosive properties: -  
Oxidizing properties: -

#### **9.2 Other information:**

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Created on: 06.07.2017

Edited on: 05.07.2018

Valid from: 01.03.2018

Version: March 2018

Previous version: October 2013

Page 5 of 7

---

### **Section 10: Stability and reactivity**

#### **10.1 Reactivity:**

This material is not reactive under normal ambient conditions.

#### **10.2 Chemical stability:**

Under regular use and storage is DMT Copper(II) oxide 15-35 nm stable.

#### **10.3 Possibility of hazardous reactions:**

Risk of ignition: Fluorine, Potassium, Hydrogen sulphide, Hydrogen  
Violent reaction with: Boron, Hydrazine, Magnesium, Sodium  
Danger of explosion: Aluminum

#### **10.4 Conditions to avoid:**

-

#### **10.5 Incompatible materials:**

-

#### **10.6 Hazard decomposition products:**

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### **Section 11: Toxicological information**

#### **11.1 Information of toxicological information:**

Shall not be classified as toxic.

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### **Section 12: Ecological information**

#### **12.1 Toxicity:**

Very toxic to aquatic life with long lasting effects.

#### **12.2 Persistence and degradability:**

Not applicable for inorganic substances.

#### **12.3 Bio accumulative potential:**

-

#### **12.4 Mobility on soil:**

-

#### **12.5 Results of PBT and vPVB assessment:**

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Created on: 06.07.2017

Edited on: 05.07.2018

Valid from: 01.03.2018

Version: March 2018

Previous version: October 2013

Page 6 of 7

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**12.6 Other adverse effects:**

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**Section 13: Disposal considerations**

**13.1 Waste treatment methods:**

DMT Copper(II) oxide 15-35nm and its container must be disposed of as hazardous waster. Dispose of contents/containers in accordance with local/regional/national/international regulations.

**Directive 2008/98/EC (Waste Framework directive):** Consult local disposal provider for exact directives.

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**Section 14: Transport information**

**14.1 UN. No:**

3077

**14.2 UN proper shipping name:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

**14.3 Transport hazard class(es):**

Class: 9

**14.4 Packing group:**

III

**14.5 Environment hazard:**

Hazardous to the aquatic environment

**14.6 Special precautions for user:**

Provisions for dangerous goods should be complied within the premises.

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

The cargo is not intended to be carried in bulk.

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**Created on:** 06.07.2017

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**Valid from:** 01.03.2018

**Version:** March 2018

**Previous version:** October 2013

Page 7 of 7

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**Section 15: Regulatory information**

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

National inventories:

EINECS/ELINCS/NLP (Europe)

REACH (Europe)

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**Section 16: Other information**

**16.1** 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.

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