

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Manganese(IV) oxide, 50 g**

Print date: 14.04.2015

Product code: 9991598

Page 1 of 7

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Manganese(IV) oxide, 50 g

CAS No: 1313-13-9  
Index No: 025-001-00-3  
EC No: 215-202-6

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Laboratory chemicals

**1.3. Details of the supplier of the safety data sheet****Seller**

Company name: CONATEX-DIDACTIC Lehrmittel GmbH  
Street: Im Forstgarten 1  
Place: D-66459 Kirkel  
Internet: www.conatex.com

**Supplier**

Company name: Carbolution Chemicals GmbH  
Street: Im Stadtwald, Gebäude A1.2  
Place: D-66123 Saarbrücken  
Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232  
e-mail: michael.bauer@carbolution-chemicals.de  
Internet: www.carbolution-chemicals.de

**1.4. Emergency telephone number:** +49 (0)681 302-71232**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

Indications of danger: Xn - Harmful  
R phrases:  
Harmful by inhalation and if swallowed.

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard categories:  
Acute toxicity: Acute Tox. 4  
Acute toxicity: Acute Tox. 4  
Hazard Statements:  
Harmful if inhaled.  
Harmful if swallowed.

**2.2. Label elements****Hazardous components which must be listed on the label**  
manganese dioxide

Signal word: Warning  
Pictograms: GHS07

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Manganese(IV) oxide, 50 g

Print date: 14.04.2015

Product code: 9991598

Page 2 of 7



#### Hazard statements

H302+H332

Harmful if swallowed or if inhaled.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Sum formula: MnO<sub>2</sub>

Molecular weight: 86,94

#### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
215-202-6	manganese dioxide	100 %
1313-13-9	Xn - Harmful R20/22	
025-001-00-3	Acute Tox. 4, Acute Tox. 4; H332 H302	

Full text of R-, H- and EUH-phrases: see section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

##### After inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

##### After contact with skin

Wash with plenty of water. Change contaminated clothing.

##### After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

##### After ingestion

Rinse mouth immediately and drink plenty of water. Medical treatment necessary.

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

No data available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

#### 5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

#### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Manganese(IV) oxide, 50 g

Print date: 14.04.2015

Product code: 9991598

Page 3 of 7

#### Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

#### SECTION 6: Accidental release measures

##### 6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

##### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

##### 6.3. Methods and material for containment and cleaning up

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

###### Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

###### Advice on protection against fire and explosion

Only use the material in places where open light, fire and other flammable sources can be kept away.

##### 7.2. Conditions for safe storage, including any incompatibilities

###### Requirements for storage rooms and vessels

Keep container tightly closed.

#### SECTION 8: Exposure controls/personal protection

##### 8.1. Control parameters

###### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
-	Manganese: its inorganic compounds (as Mn)	-	0.5		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

##### 8.2. Exposure controls

###### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

###### Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

###### Eye/face protection

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

###### Hand protection

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

###### Skin protection

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Manganese(IV) oxide, 50 g

Print date: 14.04.2015

Product code: 9991598

Page 4 of 7

#### Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state: solid  
 Colour: dark brown  
 Odour: No data available

#### Test method

pH-Value: No data available

#### Changes in the physical state

Melting point: 535 °C  
 Initial boiling point and boiling range: No data available  
 Sublimation point: No data available  
 Softening point: No data available  
 Flash point: No data available

#### Flammability

Solid: No data available  
 Gas: No data available

Lower explosion limits: No data available  
 Upper explosion limits: No data available  
 Ignition temperature: No data available

#### Auto-ignition temperature

Solid: No data available  
 Gas: No data available

Vapour pressure: No data available  
 Vapour pressure: No data available

Density: 5,026 g/cm<sup>3</sup>

Water solubility: No data available

Partition coefficient: No data available

Viscosity / dynamic: No data available

Viscosity / kinematic: No data available

Flow time: No data available

Vapour density: No data available

Evaporation rate: No data available

Solvent separation test: No data available

Solvent content: No data available

#### 9.2. Other information

Solid content: No data available

### SECTION 10: Stability and reactivity

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Manganese(IV) oxide, 50 g

Print date: 14.04.2015

Product code: 9991598

Page 5 of 7

#### 10.1. Reactivity

No data available

#### 10.3. Possibility of hazardous reactions

No data available

#### 10.4. Conditions to avoid

No data available

#### 10.5. Incompatible materials

No data available

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Toxicokinetics, metabolism and distribution

Toxicological data are not available.

##### Acute toxicity

Acute toxicity, inhalant. Acute toxicity, dermal.

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
1313-13-9	manganese dioxide				
	oral	LD50	> 3480 mg/kg	Ratte	
	inhalative vapour	ATE	11 mg/l		
	inhalative aerosol	ATE	1,5 mg/l		

##### Irritation and corrosivity

No data available

##### Sensitising effects

No data available

##### Severe effects after repeated or prolonged exposure

No data available

##### Carcinogenic/mutagenic/toxic effects for reproduction

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

##### Specific effects in experiment on an animal

No data available

##### Additional information on tests

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

#### Practical experience

##### Observations relevant to classification

No data available

### SECTION 12: Ecological information

#### 12.1. Toxicity

No data available

#### 12.2. Persistence and degradability

No data available

#### 12.3. Bioaccumulative potential

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Manganese(IV) oxide, 50 g

Print date: 14.04.2015

Product code: 9991598

Page 6 of 7

No data available

#### **12.4. Mobility in soil**

No data available

#### **12.5. Results of PBT and vPvB assessment**

No data available

#### **12.6. Other adverse effects**

No data available

#### **Further information**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

### SECTION 13: Disposal considerations

#### **13.1. Waste treatment methods**

##### **Advice on disposal**

Dispose of waste according to applicable legislation.

##### **Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

##### **Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

##### **Waste disposal number of contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

##### **Contaminated packaging**

Water (with cleaning agent). Completely emptied packages can be recycled.

### SECTION 14: Transport information

#### **Land transport (ADR/RID)**

##### **Other applicable information (land transport)**

No dangerous good in sense of these transport regulations.

#### **Inland waterways transport (ADN)**

##### **Other applicable information (inland waterways transport)**

No dangerous good in sense of these transport regulations.

#### **Marine transport (IMDG)**

##### **Other applicable information (marine transport)**

No dangerous good in sense of these transport regulations.

#### **Air transport (ICAO)**

##### **Other applicable information (air transport)**

No dangerous good in sense of these transport regulations.

#### **14.5. Environmental hazards**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Manganese(IV) oxide, 50 g

Print date: 14.04.2015

Product code: 9991598

Page 7 of 7

ENVIRONMENTALLY HAZARDOUS: no

#### SECTION 15: Regulatory information

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

###### EU regulatory information

###### Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

###### National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

#### SECTION 16: Other information

##### Relevant R-phrases (Number and full text)

20/22 Harmful by inhalation and if swallowed.

##### Relevant H- and EUH-phrases (Number and full text)

H302 Harmful if swallowed.

H302+H332 Harmful if swallowed or if inhaled.

H332 Harmful if inhaled.