

# Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



## 47501 Manganese Black

Page 1

Revised edition: 09.06.2023

Version: 5.0

Printed: 20.09.2023

### 1. Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1. Product Identifier

*Product Name:* Manganese Black

*Article No.:* 47501

*UFI:* --

#### 1.2. Relevant identified Uses of the Substance or Mixture and Uses advised against

*Identified uses:*  
Used in surface refinement for ceramic products

*Uses advised against:*

#### 1.3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

*Company:* Kremer Pigmente GmbH & Co. KG

*Address:* Hauptstr. 41-47, 88317 Aichstetten, Germany

*Tel./Fax.:* Tel +49 7565 914480, Fax +49 7565 1606

*Internet:* www.kremer-pigmente.com

*EMail:* info@kremer-pigmente.com

*Importer:* --

#### 1.4. Emergency No.

*Emergency No.:* +49 7565 914480 (Mon-Fri 8:00 - 17:00)

#### 1.4.2 Poison Center:

### 2. Hazards Identification

#### 2.1. Classification of the Substance or Mixture

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

*This product does not require classification and labelling as hazardous according to CLP/GHS.*

*Possible Environmental Effects:*

#### 2.2. Label Elements

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

*This product does not require classification and labelling as hazardous according to CLP/GHS.*

*Hazard designation:*

*Not applicable.*

*Signal word:*

*Hazard designation:*

*Safety designation:*

*Hazardous components for labelling:*

#### 2.3. Other Hazards

*Do not inhale dust.  
After inhalation: irritation of the respiratory system.*

next page: 2

# Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



## 47501 Manganese Black

Page 2

Revised edition: 09.06.2023

Version: 5.0

Printed: 20.09.2023

---

### 3. Composition/Information on Ingredients

#### 3.1. Substance

#### 3.2. Mixture

*Chemical Characterization:* (Fe,Mn)<sub>3</sub>O<sub>4</sub>. Pigment Black 33, C.I. 77537

*Information on Components / Hazardous Ingredients:*

Manganese ferrite black spinel; REACH Reg. No. > 95 %  
01-2119457599-19-0000

CAS-Nr: 68186-94-7

EINECS-Nr: 269-056-3

EC-Nr:

---

*Additional information:*

---

### 4. First Aid Measures

#### 4.1. Description of the First Aid Measures

*General information:*

*Do not leave affected persons unattended.*

*Remove contaminated clothes.*

*If symptoms occur, or in case of doubt seek medical advice.*

*Stable side position in case of unconsciousness.*

*After inhalation:*

*Supply fresh air.*

*Consult physician if symptoms persist.*

*After skin contact:*

*Remove contaminated clothing immediately. Wash off immediately with plenty of water and soap.*

*After eye contact:*

*Remove contact lens. Rinse open eyes with plenty of water (10-15 min). Should irritation continue, seek medical advice.*

*After ingestion:*

*Rinse mouth with water and drink plenty of water.*

*Do not induce vomiting.*

#### 4.2. Most important Symptoms and Effects, both Acute and Delayed

*Symptoms:*

*Gastro-intestinal complaints. May cause respiratory irritation.*

*Effects:*

#### 4.3. Indication of any Immediate Medical Attention and special Treatment needed

*Treatment:*

*No information available.*

---

### 5. Fire-Fighting Measures

#### 5.1. Extinguishing Media

*Suitable extinguishing media:*

*Foam, extinguishing powder, water spray.*

*Use extinguishing media for surrounding fire.*

next page: 3

# Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



## 47501 Manganese Black

Page 3

Revised edition: 09.06.2023

Version: 5.0

Printed: 20.09.2023

---

*Unsuitable extinguishing media:*

*Water with full jet.*

### 5.2. Special Hazards arising from the Substance or Mixture

*Special hazards:*

*Do not inhale explosion or incendiary gas.*

### 5.3. Advice for Firefighters

*Protective equipment:*

*Further information:*

*Collect contaminated extinguishing water and debris separately; avoid contamination of sewage system.*

---

## 6. Accidental Release Measures

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

*Personal precautions:*

*Ensure adequate ventilation.*

*Wear appropriate protective equipment. Keep spectators away.*

### 6.2. Environmental Precautions

*Environmental precautions:*

*Prevent contamination of soils, drains and surface water.*

### 6.3. Methods and Material for Containment and Cleaning Up

*Methods and material:*

*Take up mechanically and collect in suitable containers for disposal. Avoid dust formation.*

### 6.4. Reference to other Sections

*For information for safe handling see Section 7.*

*Protective clothing, see Section 8.*

*See Section 13 for information on disposal.*

---

## 7. Handling and Storage

### 7.1. Precautions for Safe Handling

*Instructions on safe handling:*

*Provide good ventilation and/or exhaust at the workplace. Ensure adequate ventilation. Handle and open container with care.*

*Avoid contact with eyes and skin.*

*Avoid formation of dust.*

*Hygienic measures:*

*Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.*

### 7.2. Conditions for Safe Storage, including any Incompatibilities

*Storage conditions:*

*Store in tightly sealed containers in a dry room.*

*Do not store together with: oxidants.*

*Keep away from humidity.*

*Requirements for storage areas and*

next page: 4

# Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



## 47501 Manganese Black

Page 4

Revised edition: 09.06.2023

Version: 5.0

Printed: 20.09.2023

*containers:*

*No special measures necessary.*

*Information on fire and explosion protection:*

*Removal of dust deposits.*

*Storage class:*

*13; Non combustible solids (TRGS 510)*

*Further Information:*

### 7.3. Specific End Use(s)

*Further information:*

## 8. Exposure Controls/Personal Protection

### 8.1. Parameters to be Controlled

*Parameters to be controlled (DE):*

*TRGS 900*

*TLV: 1.25 mg/m<sup>3</sup> air-borne fraction (general dust limit)*

*TLV: 10 mg/m<sup>3</sup> inhalable fraction (general dust limit)*

*Peak limit Category: 2 (II)*

*Manganese and its inorganic compounds: TLV: Average value: 0.2 mg/m<sup>3</sup> (inhalable fraction), 0.02 mg/m<sup>3</sup> (airborne fraction); Short-term value: 1.6 mg/m<sup>3</sup> (inhalable fraction), 0.16 mg/m<sup>3</sup> (airborne fraction); 1(II), Y*

*Parameters to be controlled:*

*Manganese and its inorganic compounds: IOELV (EC): Average value: 0.05 mg/m<sup>3</sup> (airborne fraction)*

*Derived No-Effect Level (DNEL):*

*10 mg/m<sup>3</sup> (worker, inhalation, long-term exposure - local effects)*

*Predicted No-Effect Concentration (PNEC):*

*Additional Information:*

*Biological limit value:*

*Manganese, inorganic compounds (DE BAT): 15 µg/l*

### 8.2. Exposure Controls

*Technical protective measures:*

*Ensure adequate ventilation, especially in confined areas.*

*Personal Protection*

*General protective measures:*

*Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.*

*Respiratory protection:*

*Respiratory equipment required in case of insufficient ventilation, filter type P3.*

*Hand protection:*

*Protective gloves (EN 374)*

next page: 5

# Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



## 47501 Manganese Black

Page 5

Revised edition: 09.06.2023

Version: 5.0

Printed: 20.09.2023

---

*Protective glove material:*

*Nitrile rubber (480 min, 0.4 mm)*

*Eye protection:*

*Safety glasses with protective shields (EN 166).*

*Body protection:*

*Environmental precautions:*

*Prevent contamination of open water ways and sewage system.  
Avoid contamination of ground water.*

---

### 9. Physical and Chemical Properties

#### 9.1. Information on Basic Physical and Chemical Properties

*Form:* powder

*Color:* black

*Odor:* odorless

*Odor threshold:*  
no information available

*pH-Value:* 7 - 10 (H<sub>2</sub>O: 50 g/l)

*Melting temperature:* > 1000°C (> 1832°F)

*Boiling temperature:*  
not applicable

*Flash point:*  
not combustible

*Evaporation rate:*  
not applicable

*Flammability (solid, gas):*  
non-combustible

*Upper explosion limit:*  
no information available

*Lower explosion limit:*  
no information available

*Vapor pressure:*  
not applicable

*Vapor density:*  
This product is a non-volatile solid.

*Density:* 4.5 -5 g/cm<sup>3</sup> (20°C)

*Solubility in water:* < 1 mg/l (20°C)

*Coefficient of variation (n-Octanol/Water):*  
no information available

*Auto-ignition temperature:*  
not applicable

next page: 6

# Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



## 47501 Manganese Black

Page 6

Revised edition: 09.06.2023

Version: 5.0

Printed: 20.09.2023

---

*Decomposition temperature:*

*not determined*

*Viscosity, dynamic:*

*not applicable*

*Explosive properties:*

*not applicable*

*Oxidizing properties:*

*not oxidizing*

*Bulk density:*

*< 1000 kg/m<sup>3</sup>*

### 9.2. Further Information

*Solubility in solvents:*

*Viscosity, kinematic:*

*Burning class:*

*Solvent content:*

*Solid content:*

*Particle size:*

*Other information:*

---

## 10. Stability and Reactivity

### 10.1. Reactivity

*The product is stable.*

### 10.2. Chemical Stability

*Stable if used according to specifications.*

### 10.3. Possibility of Hazardous Reactions

*Unknown.*

### 10.4. Conditions to Avoid

*Conditions to avoid:*

*No further information available.*

*Thermal decomposition:*

### 10.5. Incompatible Materials

*Acids*

### 10.6. Hazardous Decomposition Products

*None known.*

### 10.7. Further Information

---

## 11. Toxicological Information

### 11.1. Information on Hazard Classes as defined in Regulation (EC) No. 1272/2008

*Not classified as acutely toxic.*

*Acute Toxicity*

*LD50, oral:*

*LD50, dermal:*

next page: 7

# Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



## 47501 Manganese Black

Page 7

Revised edition: 09.06.2023

Version: 5.0

Printed: 20.09.2023

---

*LC50, inhalation:*

*Primary effects*

*Irritant effect on skin:*

*Shall not be classified as corrosive/irritant to skin.*

*Irritant effect on eyes:*

*Shall not be classified as seriously damaging or irritating to the eye.*

*Inhalation:*

*No information available.*

*Ingestion:*

*No information available*

*Sensitization:*

*Shall not be classified as a respiratory or skin sensitizer.*

*Mutagenicity:*

*Not classified as mutagenic.*

*Reproductive toxicity:*

*Not classified as reproductive toxicant.*

*Carcinogenicity:*

*Not classified as carcinogenic.*

*Teratogenicity:*

*No information available.*

*Specific target organ toxicity (STOT):*

*Repeated exposure: no organospecific toxicity expected.  
Single exposure: no organospecific toxicity expected.*

*Aspiration hazard:*

*No risk of aspiration.*

### 11.2. Information on other Hazards

*Endocrine Disrupting Properties:  
Not listed.*

---

## 12. Ecological Information

### 12.1. Aquatic Toxicity

*Not hazardous to the aquatic environment.*

*Fish toxicity:*

*Daphnia toxicity:*

*Bacteria toxicity:*

*Algae toxicity:*

### 12.2. Persistency and Degradability

*No information available.*

### 12.3. Bioaccumulation

*No information available.*

next page: 8

# Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



## 47501 Manganese Black

Page 8

Revised edition: 09.06.2023

Version: 5.0

Printed: 20.09.2023

---

### 12.4. Mobility

*No information available.*

### 12.5. Results of PBT- und vPvP Assessment

*On the basis of available data, the product does not contain any PBT or vPvB substances in percentage greater than 0.1 %.*

### 12.6. Endocrine Disrupting Properties

*This substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) No. 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1 % or higher.*

### 12.7. Other Adverse Effects

*Water hazard class:*

*Not hazardous.*

*Behaviour in sewage systems:*

*Further ecological effects:*

*Not considered to be environmentally harmful.*

*AOX Value:*

---

## 13. Disposal Considerations

### 13.1. Waste Treatment Methods

*Product:*

*Recover or recycle if possible.*

*Dispose of according to official national and local regulations.*

*European Waste Code (EWC):*

*Uncleaned packaging:*

*Non-contaminated packaging may be recycled.*

*Contaminated packaging must be disposed like the substance.*

*Waste Code No.:*

---

## 14. Transport Information

### 14.1. UN Number

*ADR, IMDG, IATA*

### 14.2. UN Proper Shipping Name

*ADR/RID:*

*No hazardous goods according to ADR / DOT (US) (land transportation).*

*IMDG/IATA:*

*Not hazardous goods*

### 14.3. Transport Hazard Classes

*ADR Class:*

*not applicable*

*Hazard no.:*

*Classification code:*

next page: 9



# Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



## 47501 Manganese Black

Page 9

Revised edition: 09.06.2023

Version: 5.0

Printed: 20.09.2023

*Tunnel restriction code:*

*IMDG Class (sea):*

*not applicable*

*Hazard no.:*

*EmS No.:*

*IATA Class:*

*not applicable*

*Hazard no.:*

### 14. 4. Packaging Group

*ADR/RID:*

*not applicable*

*IMDG:*

*IATA:*

### 14. 5. Environmental Hazards

*Not classified as environmentally hazardous.*

### 14. 6. Special Precautions for User

*Not classified as a dangerous good under transport regulations.*

### 14. 7. Maritime Transport in Bulk according to IMO Instruments

*Not transported by sea in bulk.*

### 14. 8. Further Information

## 15. Regulatory Information

### 15. 1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

*Water hazard class:*

*0, not hazardous (according to the German Regulation AwSV)*

*Local regulations on chemical accidents:*

*Employment restrictions:*

*Restriction and prohibition of application:*

*EC. REACH, Section XVII, Restrictions on the Manufacture, Placing on the Market and Use of Certain Dangerous Substances, Preparations and Articles: not applicable*

*Technical instructions on air quality:*

*Manganese (Mn):*

*5.2.1. Total dust, including fine dust: > 25 wt-% (m >= 0.2 g/h, conc. 20 mg/m<sup>3</sup>)*

*5.2.2.: Inorganic dust (class. III): > 25 wt-% (m >= 5 g/h, conc. 1 mg/m<sup>3</sup>)*

### 15. 2. Chemical Safety Assessment

*A Chemical Safety Assessment has not been carried out for this product.*

### 15. 3. Further Information

*Listed in the following inventories:*

*REACH (EC), TSCA (US)*

next page: 10

# Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



## 47501 Manganese Black

Page 10

Revised edition: 09.06.2023

Version: 5.0

Printed: 20.09.2023

---

*EC. REACH, Annex XIV, Candidate List of Substances of very High Concern (SVHC): not regulated / not applicable*

*RoHS Directive 2011/65/EC on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS): not listed.*

*VOC Content (w/w): 0 %*

---

### 16. Other Information

*This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.*