

Safety Data Sheet

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



47510 Manganese Gray

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Revised edition: 12.02.2025

Version: 9

Printed: 14.07.2025

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

1.1. Product Identifier

Product Name: Manganese Gray
Article No.: 47510
UFI: 6M30-E0T8-N00T-MUDY

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

Identified uses:
Used in surface refinement for ceramic products
Professional use
Industrial use

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
E-Mail: 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)

Acute toxicity (oral), hazard category 4
Acute toxicity (inhalation), hazard category 4
Specific target organ toxicity (repeated exposure), hazard category 2

H302 Harmful if swallowed.

Cat.: 4

H332 Harmful if inhaled.

Cat.: 4

H373 May cause damage to organs through prolonged or repeated exposure.

Cat.: 2

Possible Environmental Effects:

2.2. Label Elements

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

Hazard designation:

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GHS07-1



GHS08

Signal word:

Warning

Hazard designation:

| | |
|------|--|
| H302 | Harmful if swallowed. |
| H332 | Harmful if inhaled. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |

Safety designation:

| | |
|-----------|--|
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P264 | Wash thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P284 | Wear respiratory protection. |
| P301+P312 | If swallowed: Call a poison center or physician if you feel unwell. |
| P304+P340 | If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P312 | Call a poison center or physician if you feel unwell. |
| P330 | Rinse mouth. |
| P501 | Dispose of contents/ container according to regional, national and international regulations. |

Hazardous components for labelling:

2.3. Other Hazards

*Inhalation of dust and fumes can irritate the respiratory tract.
Avoid formation of dust.
Frequent inhalation of airborne quartz powder can cause silicosis.*

3. Composition/Information on Ingredients

3.1. Substance

3.2. Mixture

Chemical Characterization: Manganese dioxide (MnO₂) Pyrolusite. Pigment Black 14, C.I. 77728

Information on Components / Hazardous Ingredients:

| | | |
|---|-----------|--|
| Manganese(IV) oxide (H302-332-373); REACH Reg. No. 01-2119452801-43 | 75 - 95 % | CAS-Nr: 1313-13-9 EINECS-Nr: 215-202-6 EC-Nr: 025-001-00-3 |
|---|-----------|--|

| | | |
|---------------------------------|----------|--|
| Quartz, Silica (STOT RE1, H372) | 5 - 10 % | CAS-Nr: 14808-60-7 EINECS-Nr: 238-878-4 EC-Nr: |
|---------------------------------|----------|--|

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Additional information:

4. First Aid Measures

4.1. Description of the First Aid Measures

General information:

*Do not leave affected persons unattended.
Take person away from hazardous area.
Keep affected person warm in a calm area.
If symptoms occur, or in case of doubt seek medical advice.
Remove contaminated clothes immediately.
Stable side position in case of unconsciousness.*

After inhalation:

*Supply fresh air.
In case of irritation of the respiratory system seek medical help.*

After skin contact:

*Wash with soap and rinse with plenty of water.
If symptoms persist, consult a physician.*

After eye contact:

*Rinse open eyes with plenty of water for at least 15 minutes.
Seek medical attention if irritation persists.*

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.
Inhalation: irritates the respiratory system.
Impairment of the central nervous system.*

Effects:

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

Treatment:

No further information available.

5. Fire-Fighting Measures

5.1. Extinguishing Media

Suitable extinguishing media:

Foam, extinguishing powder, water spray.

Unsuitable extinguishing media:

Water with full jet.

5.2. Special Hazards arising from the Substance or Mixture

Special hazards:

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Do not inhale explosion and smoke fumes and gases.

5.3. Advice for Firefighters

Protective equipment:

Wear suitable protective clothing.

Further information:

Avoid contamination of sewage system, open water ways and ground water.

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions:

*Avoid formation of dust, wear protective clothing.
Ensure adequate ventilation.*

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.*

7. Handling and Storage

7.1. Precautions for Safe Handling

Instructions on safe handling:

*Provide adequate ventilation.
Avoid formation and deposition of dust. Provide adequate ventilation.*

Hygienic measures:

*Do not eat or drink during work. Do not smoke.
Do not inhale dust. Wash hands before breaks and at the end of work.
Avoid contact with skin, eyes and clothing.*

7.2. Conditions for Safe Storage, including any Incompatibilities

Storage conditions:

*Store in tightly sealed containers in a dry room.
Protect against humidity.*

Requirements for storage areas and containers:

Information on fire and explosion protection:

Do not store together with: oxidants.

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Do not store together with: acids.

Storage class:

13; Non combustible solids (TRGS 510)

Further Information:

7.3. Specific End Use(s)

Further information:

No further information available.

8. Exposure Controls/Personal Protection

8.1. Parameters to be Controlled

Parameters to be controlled (DE):

TRGS 900

TLV: 1.25 mg/m³ air-borne fraction (general dust limit)

TLV: 10 mg/m³ inhalable fraction (general dust limit)

Manganese and its inorganic compounds: TLV: Average value: 0.2 mg/m³ (inhalable fraction), 0.02 mg/m³ (airborne fraction); Short-term value: 1.6 mg/m³ (inhalable fraction), 0.16 mg/m³ (airborne fraction); 1(II), Y

Y: No teratogenic risk when the exposure limit values (ELV) and biological limit values (BLV) are adhered to.

Parameters to be controlled:

Manganese and its inorganic compounds: IOELV (EC): Average value: 0.05 mg/m³ (airborne fraction)

Silica, Quartz (8h, air-borne; TWA): 0.15 mg/m³ (AT; CH); 0.1 mg/m³ (FR; NO; GB; SE; BE; DK); 0.05 mg/m³ (IT; ES)

Derived No-Effect Level (DNEL):

0.2 mg/m³ (worker, inhalation, short-term exposure - systemic effects)

0,004 mg/kg bw/d (worker, skin contact, short-term exposure - systemic effects)

PNEC (Predicted No-Effect Concentration):

Fresh water: 0.14 µg/l

Sea water: 0.014 µg/l

Fresh water sediment: 37 µg/kg

Sea water sediment: 3.7 µg/kg

Sewage treatment system (STP): 100 mg/l

Soil: 28 µg/kg

Manganese(IV) oxide:

Fresh water / Sea water: 0 mg/l

Fresh water sediment: 0.037 mg/kg

Sea water sediment: 0.004 mg/kg

Sewage treatment system (STP): 100 mg/l

Soil: 0.028 mg/kg

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Biological limit value:

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

8.2. Exposure Controls

Technical protective measures:

Use appropriate local exhaust ventilation to control airborne levels.

Personal Protection

General protective measures:

Do not inhale dust. Do not eat, drink or smoke while working. 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)

Protective glove material:

Nitrile rubber (480 min, 0.4 mm)

Eye protection:

Safety glasses with protective shields (EN 166).

Body protection:

Environmental precautions:

Prevent from getting into the soil, surface water and sewage system.

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:
not determined

Melting temperature: > 723 K

Boiling temperature: 2230°C

Flash point:
not applicable

Evaporation rate:
No information available.

Flammability (solid, gas):

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not applicable

Upper explosion limit:

no information available

Lower explosion limit:

no information available

Vapor pressure:

not applicable

Vapor density:

Density:

4 - 5.1 g/cm³

Solubility in water:

insoluble

*Coefficient of variation (n-
Octanol/Water):*

not applicable

Auto-ignition temperature:

No information available.

Decomposition temperature:

No data available.

Viscosity, dynamic:

not applicable

Explosive properties:

not applicable

Oxidizing properties:

none

Bulk density:

< 1000 kg/m³

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

No decomposition if used according to specifications.

10.2. Chemical Stability

The product is stable.

10.3. Possibility of Hazardous Reactions

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None if used according to specifications.

10.4. Conditions to Avoid

Conditions to avoid:

No information available.

Thermal decomposition:

10.5. Incompatible Materials

Acids

10.6. Hazardous Decomposition Products

None

10.7. Further Information

11. Toxicological Information

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

Acute Toxicity

LD50, oral:

543.5 mg/kg (ATE)

Manganese(IV) oxide: 500 mg/kg (ATE)

Harmful if swallowed.

LD50, dermal:

No information available.

LC50, inhalation:

1.63 mg/l (4h; ATE)

Manganese(IV) oxide: 1.5 mg/l (4h; ATE)

Harmful if inhaled.

Primary effects

Irritant effect on skin:

Non irritating

Irritant effect on eyes:

Non-irritating to eyes

Inhalation:

No information available.

Ingestion:

No information available

Sensitization:

Non sensitizing.

Mutagenicity:

Not mutagenic.

Reproductive toxicity:

No reproductive toxicity expected.

Carcinogenicity:

Not cancerogenic.

Teratogenicity:

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No information available.

Specific target organ toxicity (STOT):

Single exposure: no organospecific toxicity expected.

Repeated exposure: may cause damage to organs (central nervous system) through prolonged or repeated exposure (if inhaled).

Aspiration hazard:

No risk of aspiration.

11. 2. Information on other Hazards

No further information available.

Endocrine Disrupting Properties: no information available.

12. Ecological Information

12. 1. Aquatic Toxicity

No toxicity expected.

Fish toxicity:

Daphnia toxicity:

Bacteria toxicity:

Algae toxicity:

12. 2. Persistency and Degradability

No information available.

12. 3. Bioaccumulation

No information available.

12. 4. Mobility

No information available.

12. 5. Results of PBT- und vPvP Assessment

No data available.

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:

1, slightly hazardous

Behaviour in sewage systems:

Further ecological effects:

No special effects or hazards known.

AOX Value:

13. Disposal Considerations

13. 1. Waste Treatment Methods

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Product:

Reuse, when possible.

European Waste Code (EWC):

Uncleaned packaging:

Dispose of according to official local regulations.

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:

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

None

14.6. Special Precautions for User

14.7. Maritime Transport in Bulk according to IMO Instruments

not applicable

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14.8. Further Information

Not classified as a dangerous good under transport regulations.

15. Regulatory Information

15.1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

Water hazard class:

1, slightly hazardous for water (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:

5.2.1. Total dust, including fine dust.

5.2.2.: Inorganic dust (class. III): > 25 wt-% (m >= 5 g/h, conc. 1 mg/m³)

15.2. Chemical Safety Assessment

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

EC SVHC-List (REACH, Annex XIV): not listed

15.3. Further Information

Listed in the following inventories:

REACH (EC), TSCA (US)

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.