

Name of product
Natural manganese ore - pyrolusite

Xn



FDS Code
FS020

Translation / Synonym

French: Minerai de manganèse naturel – pyrolusite

1. Identification of product

1.1. Name of the product : Pro-OX Manganese Dioxide

Chemical description: Natural manganese ore
Chemical formula: MnO₂

CAS number: 1313-13-9
Type of product: Granulates or powder

1.2. Uses :

Dry-cell industry. Oxidizing agent. Chemical industries. Pharmaceutical industry.
Pigments, Coloration. Water treatment.

1.3. Commercialized by :

ERACHEM COMILOG
rue du Bois - 7334 Saint-Ghislain, Belgium
Tel: +32-65-764 670
Fax: +32-65-764 550

1.4. Emergency telephone no.:

Belgium: anti-poison centre
+32-70-245 245

2. Information about components

This product is considered to be dangerous referring to the directives 67/548 EEC and 99/45 EEC.

Name of substance	Value(s)	CAS no.	Einecs no.	Symbol(s)	Phrase(s) R
<u>Manganese dioxide</u>	± 80%	1313-13-9	215-202-6	Xn	R20/22
<u>Manganese oxide</u>	± 3%	1344-43-0	215-695-8	None	None
<u>Silica</u>	± 5%	11126-22-0	234-368-0	None	None
<u>Fer oxide</u>	± 4%	1345-25-1	215-721-8	None	None
<u>Aluminum</u>	± 4%	1344-28-1	215-691-6	None	None

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3. Hazards identification

Phrases relating to dangers :	Harmful by inhalation and by ingestion.
Dominant mode of exposure:	Inhalation.
Symptoms associated with use:	
- Inhalation:	Excessive exposure can irritate the respiratory tract and can increase the frequency of infection of the upper respiratory tract (pneumonia).
Acute toxicity:	Excessive or prolonged inhalation of the vapors can cause metal fume fever.
Chronic toxicity:	Inhalation can cause an illness having the symptoms of influenza, characterized by shivering, fever and constant muscular pain. Prolonged and repeated inhalation of dusts and vapors can cause injury to central nervous system, termed Manganism.
- Contact with the skin:	Can cause irritation of the skin.
- Contact with the eyes:	The dust from the product can cause irritation of the eyes, flushing and pain.
- Ingestion:	Can cause abdominal pain and nausea.

4. First-aid measures

- Ingestion:	Give nothing by mouth to an unconscious person. Consult a doctor. Seek medical attention to have the stomach pumped.
- Inhalation:	Take the victim into the open air. In the event of respiratory difficulty, give oxygen. Consult a doctor.
- Contact with the skin:	Rinse abundantly with water. Generally, no first emergency aid is required. In case of appearing skin reaction, consult a doctor.
- Contact with the eyes:	In the event of contact with the eyes, rinse immediately and abundantly with water and consult a doctor.

5. Fire-prevention measures

	NON FLAMMABLE PRODUCT
Means of extinction:	Extinguish the near-by fire by using the most suitable method. Water. Carbon dioxide. Powder...
Special risks:	None.
Special procedures:	No special procedure is required.

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6. Accidental release measures

- Individual protections:** Wear gloves and safety goggles. In case of dusty atmosphere, wear a P2 or P3 dust mask.
- Measures for the Environment protection:** Product not dangerous for the environment.
- Cleaning up methods:** Collect, avoiding the emission of dust, and put the spilled product into an appropriate container for disposal. Wash the soiled area abundantly with water. Destroy in accordance with the local/national safety regulations in force.

7. Handling and storage

- Handling:** Reduce the production of dust to a minimum.
- Storage:** Keep in a dry, well ventilated place and with the required labeling. Keep the containers closed when not in use.

8. Control of exposure/individual protection

- 8.1. Occupational exposure limit:** TLV: 0.2 mg Mn/m³ ACGIH.
0.5 mg Mn/m³ Germany.
1 mg Mn/m³ France.
5 mg Mn/m³ OSHA.

Industrial hygiene: An extraction system is recommended for keeping the exposure of workers to a level below that of the limit for exposure to the product in air. Extraction by local vacuum is preferable in general as it allows control of the emissions of the contaminant at source and preventing its dispersal in the working area.

8.2. Exposure control

Individual protection

- **Protection of respiration:** If there is a risk of the excessive production of dust, spray or vapors, use authorized respiratory protection equipment. In case of dust, wear a P2 or P3 dust mask.
- **Protection of the hands:** Wear gloves.
- **Protection of the eyes:** Wear safety goggles.
- **Protection of the skin:** Wear gloves and clean clothing. A good personal hygiene is recommended.

Environment protection

Non dangerous product for the Environment. Do not drain off in sewage, natural water or on soil.

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9. Physical and chemical properties

9.1. General information:

Physical state:	Powder or granulates
Color:	Black
Odor:	None

9.2. Information related to health, safety and environment

Molecular weight:	86.94
Heaped bulk density (kg/dm ³):	1.8
Density at 20°C	5.026 g/cm ³
Vapor pressure (mmHg):	Not applicable
Relative vapor density (air=1):	Not applicable
Solubility:	Insoluble in water
pH in distilled water:	No information
Melting point:	~ 535°C, decomposition
Flash point (°C):	Not applicable

9.3. Other data:

oxidant

10. Stability and reactivity

10.1. Conditions to be avoided:	None in normal conditions Stable product
10.2. Materials to be avoided:	H ₂ O ₂ , H ₂ S ₂ O ₅ , Na ₂ O ₂ . Do not heat in the presence of easily oxidized materials. Metallic vapor may be formed in the event of heating, even decomposition.
10.3. Dangerous decomposition product:	None in normal conditions

11. Toxicological information

About product:	Poison by intravenous route. Moderately toxic by subcutaneous route.
About ingredients:	Inapplicable.
DL 50: (Lethal Dose)	422 mg/kg – subcutaneous route – mouse.
LDLo : (Lowest published lethal dose)	45 mg/kg. Intravenous route – tests on rabbits.

12. Ecological information

Processes in the environment:	The release of manganese into the environment is associated with its water-solubility (MnO ₂ is insoluble). An acid environment (soil, water) also promotes the release and mobility of the manganese. In acid soil the oxidation number +2, which is the most easily absorbed by vegetables, is favored.
Toxicity to the environment:	The presence of manganese in the environment (trace element) is essential to life for many vegetable and animal species. No specific information available.

13. Considerations regarding disposal

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Disposal of wastes: Destroy in accordance with the local/national safety regulations in force.

14. Information regarding transportation

Not regulated.

15. Regulatory information

Symbol(s): Harmful.
Phrase(s) R: R20/22 - Harmful by inhalation and by ingestion.
Phrase(s) S: None.

16. Other information

Recommended uses & Restrictions
See technical sheet for detailed recommendations.
The present material safety data sheet applies to the various qualities of ERACHEM-COMILOG products as follows: Moanda, Moanda 200 mesh, Moanda 325 mesh, FF1, HM.

The contents and format of this safety data sheet comply with Directive 2001/58/EEC

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