

MANGANESE DIOXIDE

0175

November 2003

CAS No: 1313-13-9
RTECS No: OP0350000
EC No: 025-001-00-3

Manganese(IV)oxide
Manganese peroxide
MnO₂
Molecular mass: 86.9

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Not combustible but enhances combustion of other substances.	NO contact with combustibles.	In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		PREVENT DISPERSION OF DUST! AVOID EXPOSURE OF (PREGNANT) WOMEN!	
Inhalation	Cough.	Local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin		Protective gloves.	Rinse and then wash skin with water and soap.
Eyes		Safety goggles, or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion	Abdominal pain. Nausea.	Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL

Personal protection: P2 filter respirator for harmful particles. Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Do NOT absorb in saw-dust or other combustible absorbents. Do NOT let this chemical enter the environment.

PACKAGING & LABELLING

EU classification
Xn Symbol
R: 20/22
S: (2-)25

EMERGENCY RESPONSE**SAFE STORAGE**

Separated from combustible and reducing substances.

IPCS

International
Programme on
Chemical Safety



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SEE IMPORTANT INFORMATION ON THE BACK.

IMPORTANT DATA

Physical State; Appearance
BLACK TO BROWN POWDER

Chemical dangers

The substance decomposes on heating above 553/C producing manganese(III)oxide and oxygen, which increases fire hazard. The substance is a strong oxidant and reacts violently with combustible and reducing materials causing fire and explosion hazard. Reacts violently with aluminium on heating.

Occupational exposure limits

TLV: (as Mn) 0.2 mg/m³ as TWA; (ACGIH 2006).
MAK: as Mn (Inhalable fraction) 0.5 mg/m³; Pregnancy risk group: C; (DFG 2005).

Routes of exposure

The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

Inhalation risk

Evaporation at 20/C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

Effects of short-term exposure

The aerosol is irritating to the respiratory tract.

Effects of long-term or repeated exposure

The substance may have effects on the lungs and central nervous system, resulting in increased susceptibility to bronchitis, pneumonitis and neurologic, neuropsychiatric disorders (manganism). Animal tests show that this substance possibly causes toxicity to human reproduction or development.

PHYSICAL PROPERTIES

Decomposes at 535 /C
Density: 5.0 g/cm³

Solubility in water: none

ENVIRONMENTAL DATA

This substance may be hazardous in the environment; special attention should be given to aquatic organisms.

NOTES

Depending on the degree of exposure, periodic medical examination is suggested.
Card updated in Oct 2006 - long term effects

ADDITIONAL INFORMATION

LEGAL NOTICE

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible for the use which might be made of this information