



# SAFETY DATA SHEET

5573

MANGANESE DIOXIDE

## 1. Identification of substance/preparation and of the company undertaking

<b>Trade Name:</b>	Manganese Dioxide
<b>Chemical Name:</b>	Manganese Dioxide
<b>Synonyms:</b>	None

## 2. Composition /information on ingredients

Component	CAS	EINECS	% of composition
Manganese Dioxide 80	131-13-9	2152026	70-80

The rest is associated, naturally occurring minerals, composed of iron, alumina and silica.

Manganese dioxide is classified in the CHIP regulations: harmful by inhalation and if swallowed when present at >25%

## 3. Hazards Identification

<b>Inhalation</b>	Excessive exposure causes chronic manganese poisoning, with damage to the central nervous system. Removal from exposure arrests the disease and some improvements may follow. Early symptoms include loss of appetite, headaches, dizziness, indifference and apathy.
<b>Ingestion</b>	May cause gastrointestinal upsets, nausea and vomiting. Symptoms of chronic exposure are as for the inhalation route, but the stomach absorbs manganese dioxide very slowly, so the effects are much smaller.
<b>Eyes</b>	May cause physical irritation and inflammation.
<b>Skin</b>	The material is not a primary irritant, but as with any abrasive powder it may give rise to minor irritation. The material can dehydrate skin and mucous membranes.

## 4. First Aid Measures

<b>Inhalation</b>	Remove patient to fresh air, loosen tight clothing and seek medical attention
<b>Ingestion</b>	Do not induce vomiting, seek medical advice.
<b>Eyes</b>	Wash immediately with copious amounts of water.
<b>Skin</b>	Wash affected areas with water.



## 5. Fire Fighting Hazards

<b>Extinguishing Media</b>	Suitable for surrounding fire conditions
<b>Special Exposure Hazard</b>	In the event of a fire the product may emit harmful or toxic fumes. As hazard an oxidant it will also assist ignition and combustion.
<b>Personal protective equipment</b>	Self-contained breathing apparatus and protective clothing.

## 6. Accidental Release Measure

<b>Leaks and Spills</b>	Use suitable vacuum equipment where reasonably practicable, otherwise damp down and scoop into a receptacle. Do not wash into water courses, sewers or drains.
<b>Personal protective equipment</b>	Respiratory protective equipment.

## 7. Handling & Storage

<b>Handling</b>	Do not eat, drink or smoke in areas where the material is used. Wash thoroughly after handling the material.
<b>Storage</b>	Store in a dry area. Do not use mild steel containers.

## 8. Exposure Control/Personal Protection

<b>Engineering controls</b>	Adequate ventilation should be provided so that Occupational Exposure Limits are not exceeded. Local exhaust Ventilation is normally recommended.
<b>Personal Protective Equipment</b>	Where LEV is not practicable and exposure is likely to be excessive, approved respiratory protection to CEN standards prEN 140, 141, 143 or 149 should be worn. Protective gloves and overalls are recommended for prolonged contact.

## 9. Physical & Chemical Properties

<b>Appearance and Odour</b>	Red brown powder, odourless
<b>Flash point (°C)</b>	Not applicable
<b>Flammability</b>	Not applicable
<b>Explosive properties</b>	Non-explosive
<b>Oxidising properties</b>	Mildly oxidising
<b>Specific Gravity</b>	3-5
<b>pH Value</b>	7 (Insoluble in water)
<b>Melting point (°C)</b>	Not available

## 10. Stability & Reactivity

<b>Chemical Stability</b>	The material is stable
<b>Conditions/ materials to avoid</b>	An easily oxidised material



<b>Hazardous decomposition products</b>	None known
<b>Hazardous polymerization products</b>	None

### 11. Toxicological Information

<b>Acute toxicology</b>	LD50	Oral	<2000mg/kg and >200mg/kg
	LD50	Dermal	Not known
	LD50	Inhalation	Not known
<b>Health Effects</b>	Prolonged or repeated exposure above Occupational Exposure Standards may cause fibrosis of the lungs and damage to the central nervous system, resulting in headaches, dizziness, apathy, weight loss and loss of appetite.		

### 12. Ecological Information

<b>Ecotoxicity</b>	Not known
<b>Persistence</b>	The product is chemically stable and will persist in the environment.

### 13. Disposal Considerations

Dispose in accordance with current waste Disposal regulations (for UK – Control of Pollution {Special Waste} Regulations 1980). Landfill is the most appropriate method.

### 14. Transport Information

<b>UN/SI No.</b>		Not restricted
<b>UN Class</b>		Not restricted
<b>Packing group</b>		Not restricted
<b>Road</b>	UK	Not restricted
	ADR	Not restricted
<b>Sea</b>	IMO	Not restricted
<b>Air</b>	ICAO	Not restricted

### 15. Regulatory Information

<b>EC Supply Labelling</b>	Harmful		
<b>R Phrases</b>	R20/22	Harmful by inhalation and if swallowed.	
<b>S phrases</b>	S20/21	When using do not eat, drink or smoke.	
	S22/23	Do not breathe dust or spray	
	S25	Avoid contact with the eyes	
<b>UK Occupational exposures limits (Refer to HSE Guidance note EH40)</b>	<b>Mg/m<sup>3</sup></b>	<b>8 hr TWA</b>	<b>% in product</b>
Manganese compounds (as M)		5	48-54



In accordance with HSE Approved Code of Practice for CHIP, the recipient is reminded of their obligations under both the Health and Safety at Work Act (HSWA) and the Control of Substances Hazardous to Health Regulations (COSHH), and that the information in any safety data sheet does not constitute the user's assessment of workplace risk.

## 16. Other Information

### References

<b>COSHH ACOP</b>	HSC approved Code of Practice for the Control of Substances Hazardous of Health Regulations 1994
<b>CHIP 96</b>	Chemicals (Hazardous Information and Packaging for Supply) Regulations 1996
<b>CHIP SDS ACOPS</b>	HSC Approved Code of Practice for Safety data Sheets in accordance with Regulation 6 of the CHIP regulations.
<b>HSE EH40</b>	HSE Guidance note EH40 on Occupational Exposure Limits to be used in conjunction with the COSHH regulations.

### Footnote:

#### LIABILITY

Such information is the best of Clayman Supplies Limited's knowledge and belief accurate at the date of publication, which is the date generated automatically on the day of printing of this document. However, no representation, warranty of guarantee is made as to its accuracy, reliability of completeness. It is the user's responsibility to satisfy itself as to the suitability and completeness of such information for their own particular use.

#### THIRD PARTY MATERIALS

Insofar as materials not manufactured or supplied by Clayman Supplies Limited are used in conjunction with, or instead of Clayman Supplies Limited's materials, it is the responsibility of the customer itself to obtain from the manufacturer or supplier all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of Clayman Supplies Ltd materials in conjunctions with other materials.

## 17. National Legislation

SI 1993/1746 Chemicals (Hazard Information and Packaging) Regulations 1993  
Environment Protection (Duty of Care) regulations 1992 SI 2839  
Carriage of Dangerous Goods by Road and Rail Regulations 1994  
Control of Pollution Act 1974  
Environmental Protection Act 1990  
Highly Flammable Liquids and Petroleum Spirit Regulations 1972  
EH40 Occupational Exposure Limits  
SI1988/1657 The Control of Substances Hazardous to Health Regulations



Note – This is not an exhaustive list and users should satisfy themselves that they comply with all relevant National Regulations.

### **Important Notes**

Design CHIP-002

The material must only be used for its stated purpose and the information contained within this data sheet is offered solely for use in the evaluation of this product in respect of safety, health and environmental hazards.

Further reference can be made to our standard terms and conditions of sale, a copy of which is available on request.