

## SECTION 1: Identification of the substance/mixture and of the company/undertaking.

### 1.1. Product identifier

Product name : Manganese Dioxide

REACH registration No. : See section 3

Synonyms : Mangalox, Manganese Ore

### 1.2. Relevant identified uses of the substance or mixture and uses advised against 1.2.1.

#### Relevant identified uses

Use of the substance/preparation:

Substance used as such, in formulation or in formulation of products such as:

- Refractories
- Glass
- Ceramics
- Steel industries

#### 1.2.2. Uses advised against

- None

Full text of use descriptors: see section 16.

### 1.3. Details of the supplier of the safety data sheet

Simba Materials Limited t/a CTM Potters Supplies

Unit 7-8

Broomhouse Lane Industrial Estate

Broomhouse Lane

Edlington

Doncaster

DN12 1EQ

T +44 (0)1709 770801 - F +44 (0)1709 770803

[doncaster@ctmpotterssupplies.co.uk](mailto:doncaster@ctmpotterssupplies.co.uk) – [www.ctmpotterssupplies.co.uk](http://www.ctmpotterssupplies.co.uk) - [admin@ctmpotterssupplies.co.uk](mailto:admin@ctmpotterssupplies.co.uk)

Unit 10A

Millpark Industrial Estate

White Cross Road

Woodbury Salterton

nr Exeter

Devon

EX5 1EL

T +44 (0)1395 233077 - F +44 (0)1395 233905

### 1.4. Emergency telephone number

T +44 (0)1709 770801 (Office hours only)

[doncaster@ctmpotterssupplies.co.uk](mailto:doncaster@ctmpotterssupplies.co.uk)

**SECTION 2: Hazards identification.****2.1. Classification of the substance or mixture**

Depending on the type of handling and use (e.g. grinding, drying etc.), airborne respirable crystalline silica may be generated. Prolonged and/or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness. Occupational exposure to respirable crystalline silica dust should be monitored and controlled.

**Classification according to Directive 67/548/EEC**

X; R20/22 – harmful by inhalation and if swallowed

**2.2. Label elements****Labelling according to Classification according to Directive 67/548/EEC****Xn - Harmful**

R-phrase(s)

R20/22 – harmful by inhalation and if swallowed

Full text of R-phrases: see section 16

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

S-phrase(s)

S25 – Avoid contact with eyes

Full text of H-phrases: see section 16

**2.3. Other hazards**

None

**SECTION 3: Composition/information on ingredients.****3.1. Mixtures**

Chemical nature: Mixture

Impurities: Quartz (respirable)						
Chemical Name	EC-No	CAS-No.	Weight %	Classification (67/548/EEC)	Classification (1272/2008/EC)	Reach Registration Number
Naturally occurring substance Manganese ore	310-127-6	999999-99-4	0-100			Exempted
Manganese Dioxide	215-202-6	1313-13-9	0-100	Xn;R20/22		Exempted
Hausmannite	215-266-5	1317-35-7	0-50			01-211944816735-XXXX
Respirable Crystalline Silica (Quartz)	238-878-4	14808-60-7	<1	Xn;R48/20		Exempted

Full text of R-, H- and EUH-phrases: see section 16

**SECTION 4: First aid measures.****4.1. Description of first aid measures**

**Inhalation:** Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

**Ingestion:** Rinse mouth thoroughly. Get medical attention if any discomfort continues.

**Skin contact:** Wash skin with soap and water. Get medical attention if irritation persists after washing.

**Eye contact:** Make sure to remove any contact lenses from the eyes before rinsing. Rinse eye with water immediately. Get medical attention if any discomfort continues.

**4.2. Most important symptoms and effects, both acute and delayed**

**Inhalation:** May cause coughing

**Ingestion:** May cause indigestion

**Skin contact:** No specific symptoms noted.

**Eye contact:** May cause acute redness of the eyes

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5: Firefighting measures.****5.1. Extinguishing media**

**Suitable extinguishing media:** Powder. CO2. Sand.

**Unsuitable extinguishing media:** None

**5.2. Special hazards arising from the substance or mixture**

**Fire hazard:** Not flammable.

**Explosion hazard:** No explosive properties known.

**Reactivity:** Stable under normal conditions of handling and storage.

**5.3. Advice for firefighters**

**Protection during firefighting:** No specific fire fighting procedures given.

## SECTION 6: Accidental release measures.

### 6.1. Personal precautions, protective equipment and emergency procedures

**General measures:** Keep public away from danger area. See section 8.2.

#### 6.1.1. For non-emergency personnel

No additional information available

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent entry to sewers and soil. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Sweep or shovel spills into appropriate container for disposal. Avoid dust production.

### 6.4. Reference to other sections

See section 8 and 13 for more information.

## SECTION 7: Handling and storage.

### 7.1. Precautions for safe handling

**Precautions for safe handling:** Do not breathe dust. Wash hands plentifully and other exposed areas with water after handling. Remove contaminated clothing and shoes. Wash clothing before re-using.

**Packagings:** Even those that have been emptied, will retain product residue. Always obey safety warnings and handle empty packages as if they were full. Avoid all contact with this substance.

**Hygiene measures:** When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Remove contaminated clothing and shoes.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage conditions:** Store in dry, cool, well-ventilated area. Keep away from food, drink and animal feeding stuffs.

### 7.3. Specific end use(s)

The identified uses for this product are detailed in section 1.2

**SECTION 8: Exposure controls/personal protection.****8.1. Control parameters**

**Exposure limits:** Follow workplace regulatory exposure limits for all types of airborne dust (e.g. total dust, respirable dust)

Chemical Name	United Kingdom
Naturally occurring substance Manganese ore	TWA: 0.5mg/m <sup>3</sup> as Mn
Manganese Dioxide	TWA: 0.5mg/m <sup>3</sup> as Mn
Hausmannite	TWA: 0.5mg/m <sup>3</sup> as Mn
Respirable Crystalline Silica (Quartz)	TWA: 0.1mg/m <sup>3</sup>

**8.2. Exposure controls**

**Appropriate engineering controls:** Use as far as possible in a closed system. Provide a regular control of the atmosphere. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Local exhaust and general ventilation must be adequate to meet exposure standards. Please refer to the annex (exposure scenarios).

**Hand protection:** Use gloves resistant to chemical products corresponding to EN 374:3. Take advice to gloves' manufacturer.

**Eye protection:** Wear safety glasses with side shields according EN 166.

**Skin and body protection:** Wear closed protective clothing.

**Respiratory protection:** Use respiratory protection mask according to EN 140 or EN 405 with filter type P3 according to EN 143:2000 or FFP3 according to EN 149:2001.

**Environmental exposure controls:** Avoid release to the environment.

**SECTION 9: Physical and chemical; properties.**

Physical state	Solid Powder.
Colour	Black.
Odour	odourless.
Odour threshold	Not applicable
pH	7 (@10% aqueous dispersion)
Relative evaporation rate (butylacetate=1)	No data available
Melting point	>1,000 °C
Freezing point	Not applicable
Boiling point	Not applicable
Flash point	Not flammable
Self ignition temperature	Not flammable
Decomposition temperature	550°C
Flammability (solid, gas)	Not flammable
Vapour pressure	Not applicable.
Relative vapour density at 20 °C	No data available
Relative density	4.5 (water =1)
Density	No data available
Solubility	Negligible.
Log Pow	Not applicable
Log Kow	Not applicable
Viscosity, kinematic	Not applicable
Viscosity, dynamic	Not applicable
Explosive properties	Not explosive.
Oxidising properties	Oxidiser
Explosive limits	Not applicable

**9.2. Other information**

No additional information available

**SECTION 10: Stability and reactivity.****10.1. Reactivity**

No specific reactivity hazards associated with this product.

**10.2. Chemical stability**

Stable under normal conditions of handling and storage.

**10.3. Possibility of hazardous reactions**

Not relevant.

**10.4. Conditions to avoid**

Not relevant

**10.5. Incompatible materials**

No specific, or groups of materials, are likely to react to produce a hazardous situation.

**10.6. Hazardous decomposition products**

Oxygen

**SECTION 11: Toxicological information.****11.1. Information on toxicological effects****Acute toxicity:** Based on LD50/LC50 value(s) below, this product does not need to be classified as acute toxic.

Chemical Name	LD50 Oral	LD50 Dermal	LC Inhalation
Manganese Dioxide	>3,478mg/kg (Rat) 9,000mg/kg (Rat)		

Acute toxicity	Based on available data, the classification criteria are not met.
Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
STOT – single exposure	Based on available data, the classification criteria are not met.
STOT – repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information.

### 12.1. Acute fish toxicity

Not relevant

### 12.2. Persistence and degradability

This product is not readily biodegradable.

### 12.3. Bioaccumulative potential

The product is not bioaccumulating.

### 12.4. Mobility in soil

Negligible.

### 12.5. Results of PBT and vPvB assessment

This substance/mixture does not meet the PBT or vPvB criteria of REACH, annex XIII.

### 12.6. Other adverse effects

None known.

## SECTION 13: Disposal considerations.

### 13.1. Waste treatment methods

**Waste treatment methods:** Dispose of this material and residues in accordance with local authority requirements.

**Additional information:** Empty packaging can have residues or dusts and are subject to proper waste disposal, as above.

**Ecology - waste materials:** See the european waste catalogue.



## SECTION 14: Transport information.

### 14.1. UN number

The product is not covered by international regulation on transport of dangerous goods (IMDG, IATA, ADR/RID).

### 14.2. UN proper shipping name

Not classified for transportation.

### 14.3. Transport hazard class(es)

Not classified for transportation.

### 14.4. Packing group

Not classified for transportation.

### 14.5. Environmental hazards

Other information: No environmental hazards known with this product.

### 14.6. Special precautions for user

Not classified for transportation.

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

## SECTION 15: Regulatory information.

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.

#### National regulatory information:

No information available.

#### International legislation/requirements:

No information available.

**EU Legislation:**

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18<sup>th</sup> December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulations (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16<sup>th</sup> December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

**15.2. Chemical Safety Assessment.**

Exempted from REACH Registration in accordance with Annex V.7

**SECTION 16: Other information.****Full text of R-phrases referred to under sections 2 and 3**

**R20/22** – Harmful by inhalation and if swallowed

**R48/20** – Harmful: danger of serious damage to health by prolonged exposure through inhalation.

**Indication of the changes made to the previous version of SDS**

Date of the previous version, National occupational exposure limits, Respiratory protection

**Abbreviations and acronyms:**

ADN: European Agreement concerning international carriage of Dangerous goods by Inland waterways

ADR: European Agreement concerning international carriage of Dangerous goods by Road

AF: Assessment factor

BCF: Bioconcentration factor

Bw: Body weight

CAS: Chemical Abstracts Service

CLP: Classification, labelling, packaging

CSR: Chemical Safety Report

DMEL: Derived maximum effect level

DNEL: Derivative No effect Level

EC: European Community

ELV: Emission limit values

EN: European Norm

EUH: European Hazard Statement

EWC: European Waste catalogue

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

IMDG: International Maritime Dangerous Goods

LC50: Median lethal concentration

LD50: Median lethal dose

NOEC: No observed effect concentration

NOEL: No observed effect level

OEL: Operator exposure level

PBT: Persistent, bioaccumulative, Toxic

PEC: Predicted effect level

PNEC: Predicted No effect Concentration

REACH: Registration, evaluation and autorisation of chemicals

RID: Regulations concerning the international carriage of dangerous goods by rail

STEL: Short Term Exposure Limit

TWA: Time weighted average

vPvB: Very persistent, very bioaccumulative.

### **Training advice:**

Workers must be informed of the presence of crystalline silica and trained in the proper use and handling of this product as required under applicable regulations.

### **Social Dialogue on Respirable Crystalline Silica**

A multi-sectorial social dialogue agreement on workers Health Protection through the Good Handling and Use of Crystalline Silica Products Containing it was signed on 25<sup>th</sup> April 2006. This autonomous agreement, which receives the European Commission's financial support, is based on a Good Practices Guide. The requirements of the Agreement came into force on 25<sup>th</sup> October 2006. The Agreement was published in the Official Journal of the European Union (2006/C 279/02). The text of the Agreement and its annexes, including the Good Practices Guide, are available from <http://www.nepsi.eu> and provide useful information and guidance for the handling of products containing respirable crystalline silica. Literature references are available on request from EUROSIL, the European Association of Industrial Silica Producers.

### **Health & Safety Executive (Specific for UK)**

Detailed reviews of the scientific evidence on the health effects of crystalline silica have been published by HSE (Health and Safety Executive, UK) in the Hazard Assessment Documents EH75/4 (2002) and EH75/5 (2003). The HSE points out on its website that "Workers exposed to fine dust containing quartz are at risk of developing a chronic and possibly severely disabling lung disease known as "silicosis". In addition to silicosis, there is now evidence that heavy and prolonged workplace exposure to dust containing crystalline silica can lead to an increased risk of lung cancer. The evidence suggests that an increased risk of lung cancer is likely to occur only in those workers who have developed silicosis". In addition to silicosis, there is now evidence that heavy and prolonged workplace exposure to dust containing crystalline silica can lead to an increased risk of lung cancer. The evidence suggests that an increased risk of lung cancer is likely to occur only in those workers who have developed silicosis.

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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

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