



CLAYMAN

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SAFETY DATA SHEET

| | |
|------|-------------------|
| 5573 | MANGANESE DIOXIDE |
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| 1. Identification of substance/preparation and of the company undertaking | |
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| Trade Name: | Manganese Dioxide |
| Chemical Name: | Manganese dioxide with associated minerals |
| Synonyms: | None |

| 2. Composition /information on ingredients | | | |
|---|-----------|---------|------------------|
| Component | CAS | EINECS | % of composition |
| Manganese Dioxide | 1313-13-9 | 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 | |
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| Inhalation | 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. Later symptoms include disturbances in gait and speech, rigid facial expressions (mask like) and tremors of the limbs. |
| Ingestion | Mays 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. |
| Eyes | May cause physical irritation and inflammation. |
| Skin | 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 | |
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| Inhalation | Remove patient to fresh air, loosen tight clothing and seek medical attention. |
| Ingestion | Do not induce vomiting, seek medical advice. |
| Eyes | Wash immediately with copious amounts of water. |
| Skin | Wash affected area with water. |



| 5. Fire Fighting Hazards | |
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| Extinguishing Media | Suitable for surrounding fire conditions. |
| Special Exposure hazard | In the event of fire, the product may emit harmful or toxic fumes. As an oxidant it will also assist ignition and combustion. |
| Personal protective equipment | Self contained breathing apparatus and protective clothing. |

| 6. Accidental Release Measure | |
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| Leaks and Spills | Use suitable vacuum equipment where reasonably practicable, otherwise damp down and scoop into a receptacle. Do not wash into water courses, sewers or drains. |
| Personal protective equipment | Respiratory protective equipment. |

| 7. Handling & Storage | |
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| Handling | Do not eat, drink or smoke in areas where the material is used. Wash thoroughly after handling the material. |
| Storage | Store in dry area. Do not use mild steel containers. |

| 8. Exposure Control/Personal Protection | |
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| Engineering controls | Adequate ventilation should be provided so that Occupational Exposure Limits are not exceeded. Local Exhaust Ventilation is normally recommended. |
| Personal protective equipment | 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 | |
|-----------------------------------|-----------------------------|
| Appearance and Odour | Red brown powder, odourless |
| Flash point (°C) | Not applicable |
| Flammability | Not applicable |
| Explosive properties | Non-explosive |
| Oxidising properties | Mildly oxidising |
| Specific Gravity | 3-5 |
| pH value | 7 (insoluble in water) |
| Melting point (°C) | Not available |

| 10. Stability & Reactivity | |
|-----------------------------------|------------------------------|
| Chemical stability | The material is stable |
| Conditions/ materials to avoid | An easily oxidised material. |
| Hazardous decomposition products | None known |
| Hazardous polymerization products | None |



| 11. Toxicological Information | | | |
|-------------------------------|--|------------|--------------------------|
| Acute Toxicology | LD50 | Oral | <2000mg/kg and >200mg/kg |
| | LD50 | Dermal | Not known |
| | LD50 | Inhalation | Not known |
| Health Effects | 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. (Refer to Section 3) | | |

| 12. Ecological Information | |
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| Ecotoxicity | Not known |
| Persistence | The product is chemically stable and will persist in the environment. |

| 13. Disposal Considerations | |
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| 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 | | |
|---------------------------|----------------|----------------|
| UN/SI No. | Not classified | |
| UN Class | Not classified | |
| Packing group | Not classified | |
| Road | UK | Not classified |
| | ADR | Not classified |
| Sea | IMO | Not classified |
| Air | ICAO | Not classified |

| 15. Regulatory Information | | | |
|--|-------------------|--|--------------|
| EC Supply Labelling | Harmful | | |
| R Phrases | R20/22 | Harmful by inhalation and if swallowed | |
| | S20/21 | When using do not eat, drink or smoke. | |
| | S22/23 | Do not breathe dust or spray | |
| | S25 | Avoid contact with eyes. | |
| UK Occupational exposures limits (Refer to HSE Guidance note EH40) | Mg/m ³ | 8 hr TWA | % in product |
| 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 | |
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| References | |
| COSHH ACOP | HSC approved Code of Practice for the Control of Substances Hazardous to Health Regulations 1994 |
| CHIP 96 | Chemicals (Hazardous Information and Packaging for Supply) Regulations 1996 |
| CHIP SDS ACOPS | HSC Approved Code of Practice for Safety data Sheets in accordance with Regulation 6 of the CHIP regulations. |
| HSE EH40 | HSE Guidance note EH40 on Occupational Exposure Limits to be used in conjunction with the COSHH regulations. |