



Material Safety Data Sheet

SIBELCO MANGANESE DIOXIDE PRODUCTS - GROUP 1

Infosafe™ LPV3H **Issue Date** February 2011 **Status** ISSUED by **BS: 1.16.5**
No. SIBELCO

Classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name SIBELCO MANGANESE DIOXIDE PRODUCTS - GROUP 1

Product Code

Company Name SIBELCO AUSTRALIA LIMITED

Address 49-55 Woodlands Drive Braeside
Vic 3195

Emergency Tel. 1800 638 556

Telephone/Fax Number Tel: (03)9586 5400
Fax: (03)9586 5413

Recommended Use Used as a ceramic pigment for building ceramics and as an oxidising agent in welding electrodes.

Other Names	Name	Product Code
	53	
	75	
	150	
	Manganese Dioxide 53	
	Manganese Dioxide 75	
	Manganese Dioxide 150	

2. HAZARDS IDENTIFICATION

Hazard Classification HAZARDOUS SUBSTANCE.
NON-DANGEROUS GOODS.

Classified as Hazardous according to criteria of National Occupational Health & Safety Commission, Australia (NOHSC).

Not Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Risk Phrase(s) R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Safety Phrase (s) S22 Do not breathe dust.
S38 If insufficient ventilation, wear suitable respiratory equipment.
S45 In case of accident or if you feel unwell seek medical advice immediately
S24/25 Avoid contact with skin and eyes.
S37/39 Wear suitable gloves and eye/face protection.

Other Information Undertake health and safety risk assessment on safe methods of handling and use appropriate to your workplace.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Name	CAS	Proportion
	Quartz	14808-60-7	<4%
	Pyrolusite		>74%
	Cryptomelane		<15%
	Goethite		<7%

Contains 2% respirable free crystalline silica in the form of quartz.

4. FIRST AID MEASURES

Inhalation If inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms persist seek medical attention.

Ingestion Do not induce vomiting. Wash out mouth thoroughly with water. If symptoms develop seek medical attention.

Skin Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

Eye If in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and persist seek medical attention.

First Aid Facilities Eye wash and normal washroom facilities.

Advice to Doctor Treat symptomatically.

Other Information For advice in an emergency, contact a Poisons Information Centre (Phone Australia 13 1126) or a doctor at once.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing media that are suitable for the surrounding combustible materials.
Hazards from Combustion Products	Under fire conditions this product may emit toxic and/or irritating fumes and gases including carbon monoxide and carbon dioxide.
Specific Hazards	The product is not combustible, however the packaging may burn under fire conditions.
Precautions in connection with Fire	Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures	Increase ventilation. Evacuate all unprotected personnel. Wear sufficient respiratory protection and full protective clothing to prevent exposure. Sweep up material avoiding dust generation or dampen spilled material with water to avoid airborne dust, then transfer material to a suitable container. Wash surfaces well with soap and water. Seal all wastes in labelled plastic containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.
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7. HANDLING AND STORAGE

Precautions for Safe Handling	Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of dust in the work atmosphere. Avoid inhalation of dust, and skin or eye contact. Maintain high standards of personal hygiene i.e. Washing hands prior to eating, drinking, smoking or using toilet facilities.
Conditions for Safe Storage	Store in a cool, dry, well-ventilated area, out of direct sunlight and moisture. Protect containers/bags from damage. Avoid generation of dust. Keep containers tightly closed. Store away from bases, water and other incompatible materials. Have appropriate fire extinguishers available in and near the storage area. Ensure that storage conditions comply with applicable local and national regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards	Name	STEL (mgm3)	STEL (ppm)	TWA (mgm3)	TWA (ppm)
	Quartz			0.1	
	Pyrolusite			1	

Biological

Limit Values No biological limits allocated.

Other Exposure Information

No exposure standard is established for this material by the National Occupational Health & Safety Commission (NOHSC, Australia, however the exposure standards for respirable crystalline silica, in the form of quartz, and manganese compounds as set by NOHSC are given above.
 Note: The exposure limit for dust otherwise not specified is TWA 10 mg/m³ (inspirable fraction).
 TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.
 STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

Engineering Controls

Good ventilation adequate to maintain the concentration below exposure standards is required. The use of a local exhaust ventilation system (drawing dusts away from workers breathing zone) is recommended. If the engineering controls are not sufficient to maintain concentrations of particulates below the exposure standards, suitable respiratory protection must be worn.

Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable particulate filter should be used. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye Protection

Safety glasses with side shields or chemical goggles should be worn. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection

Wear gloves of impervious material. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance

Body Protection

Suitable protective workwear should be worn when working with this material, e.g. cotton overalls buttoned at neck and wrist.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Black powder.

Odour

Not available

Melting Point	Not available
Boiling Point	Not applicable
Solubility in Water	Insoluble
Specific Gravity	4.40
pH Value	7.9 (20% slurry)
Vapour Pressure	Not applicable
Vapour Density (Air=1)	Not applicable
Flash Point	Not applicable
Flammability	Non-combustible solid.
Auto-Ignition Temperature	Not applicable
Flammable Limits - Lower	Not applicable
Flammable Limits - Upper	Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions of storage and handling.
Conditions to Avoid	Dust accumulation.
Incompatible Materials	Not available.
Hazardous Decomposition Products	Thermal decomposition may result in the release of toxic and/or irritating fumes.
Hazardous Polymerization	Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information	No toxicity data available for this product.
Inhalation	Inhalation of dusts may irritate the respiratory system. Breathing of dust may cause shortness of breath, and aggravate asthma and inflammatory or fibrotic pulmonary disease. Inhalation may cause delayed lung disease.

Ingestion	Ingestion of large amounts may irritate the gastric tract causing nausea and vomiting.
Skin	Skin contact may cause mechanical irritation resulting in redness and itching.
Eye	Eye contact may cause mechanical irritation.
Chronic Effects	Harmful, danger of serious damage to health by prolonged exposure through inhalation. The product contains respirable free crystalline silica. Repeated, prolonged or concentrated inhalation of respirable crystalline silica dust may lead to silicosis, a serious lung disease. The onset of silicosis is usually slow and lung damage may occur even when no symptoms or signs of ill-health have occurred. Silicosis can develop to a more serious degree even after exposure has ceased, and may also lead to other diseases including heart disease and scleroderma. Chronic exposure to manganese dioxide can lead to manganese poisoning, called manganism. It is characterized by CNS effects including languor, sleepiness, weakness, a mask-like appearance of the face, emotional instability, spastic gait, and anemia. Repeated inhalation of manganese dioxide dust can cause manganese pneumonitis and increase susceptibility to pneumonia.
Carcinogenicity	The product contains a small proportion of respirable crystalline silica as quartz (2%). Crystalline silica has been classified by International Agency for Research on Cancer (IARC) as carcinogenic to humans by inhalation (Group 1) Furthermore, crystalline silica can cause silicosis or other lung diseases on prolonged exposure.
Acute Toxicity - Inhalation	Acute aspiration may cause drying and irritation of the respiratory tract, cough, dyspnea, sneezing, vomiting, cyanosis, and pulmonary edema which may be delayed by up to several hours.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Not available
Persistence / Degradability	Not available
Mobility	Not available
Environment Protection	Prevent this material entering waterways, drains and sewers.

13. DISPOSAL CONSIDERATIONS

Disposal Considerations	Dispose of waste according to applicable local and national regulations.
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14. TRANSPORT INFORMATION

Transport Information Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

15. REGULATORY INFORMATION

Regulatory Information Classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia.
Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Poisons Schedule Not Scheduled

Hazard Category Harmful

16. OTHER INFORMATION

Date of preparation or last revision of MSDS MSDS Reviewed: February 2011
Supersedes: January 2006

Contact Person/Point Emergency Advice: ACOHS ERS - 1800 638 556 (24 Hours)

PLEASE NOTE:

The information contained herein is based on data available to Sibelco Australia Limited from both our own technical sources and from recognised published references and is believed to be both accurate and reliable. Sibelco Australia Limited has made no effort to censor nor to conceal deleterious aspects of this product. Since we cannot anticipate or control the many different conditions under which this information and our products may be used, each user should review these recommendations in the specific context of the intended application and confirm whether they are appropriate. It is therefore recommended that you undertake your own risk assessment in relation to your method of handling and proposed use of this product. Sibelco Australia Limited accepts no liability whatsoever for damage or injury caused from the use of this information or of suggestions contained herein.

End of MSDS

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