

SAFETY DATA SHEET

Manganese Dioxide 53

Infosafe No.: LQ2HB
Issued Date: 08/02/2016
Issued by: SIBELCO NEW ZEALAND LIMITED

1. IDENTIFICATION

GHS Product Identifier

Manganese Dioxide 53

Product Code**Company Name**

SIBELCO NEW ZEALAND LIMITED

Address

Company No: 68136
5 Lockhart Place Mt Wellington
Auckland 1060 New Zealand

Telephone/Fax Number

Tel: 64 (09) 9147010
Fax: 64 (09) 9147014

Emergency phone number

0800 154 666 (24hrs)

Recommended use of the chemical and restrictions on 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	
SIBELCO MANGANESE DIOXIDE PRODUCTS - GROUP 1	
Manganese Dioxide 75	
Manganese Dioxide 150	

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture

Classified as Hazardous according to the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001, New Zealand.
Classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2012 Transport of Dangerous Goods on Land.

6.1B (Inhalation – gases) - Substance that is acutely toxic

6.1D (Oral) - Substance that is acutely toxic

6.4A Substance that is irritating to the eyes

6.7A Substance that is known or presumed to be a human carcinogen

6.8B Substance that is suspected to be a human reproductive or developmental toxicant
6.8C Substance that produces toxic human reproductive or developmental effects on or via lactation
6.9A (Repeated exposure) - Substance that is toxic to human target organs or systems
9.3C Substance that is harmful to terrestrial vertebrates

Signal Word (s)

DANGER

Hazard Statement (s)

H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H350 May cause cancer .
H361 Suspected of damaging fertility or the unborn child .
H362 May cause harm to breast-fed children.
H372 Causes damage to organs through prolonged or repeated exposure by inhalation.
H433 Harmful to terrestrial vertebrates.

Precautionary Statement (s)

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.

Pictogram (s)

Skull and crossbones, Health hazard



Precautionary statement – Prevention

P102 Keep out of reach of children.
P103 Read label before use.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P263 Avoid contact during pregnancy/while nursing.
P264 Wash contaminated skin thoroughly after handling
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required.
P284 Wear respiratory protection.

Precautionary statement – Response

P101 If medical advice is needed, have product container or label at hand.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P310 Immediately call a POISON CENTER or doctor/physician.
P314 Get medical advice/attention if you feel unwell.
P330 Rinse mouth.
P337+P313 If eye irritation persists: Get medical advice/attention.

Precautionary statement – Storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Precautionary statement – Disposal

P501 In the case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Regulations 2001. This may also include any method of disposal that must be avoided. See Section 13 for disposal details.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Information on Composition

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

Ingredients

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

4. FIRST-AID MEASURES

Inhalation

Avoid becoming a casualty - to protect rescuer, use air-viva, oxy-viva or one-way mask. Remove affected person from contaminated area - Apply artificial respiration if not breathing. Do not give direct mouth to mouth resuscitation. Resuscitate in a well ventilated area. Seek IMMEDIATE medical attention.

Ingestion

Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.

Skin

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

Eye contact

If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. Seek medical attention.

First Aid Facilities

Eyewash, safety shower and normal washroom facilities.

Advice to Doctor

Treat symptomatically.

Other Information

For advice in an emergency, contact a Poisons Information Centre (Phone New Zealand 0800 POISON / 0800 764 766) or a doctor at once.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon dioxide, dry chemical, foam, water fog or water mist.

Unsuitable Extinguishing Media

Do not use water jet.

Hazards from Combustion Products

Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide, carbon dioxide and oxides of nitrogen.

Specific Hazards Arising From The Chemical

The product is not combustible, however the packaging may burn under fire conditions.

Hazchem Code

2X

Decomposition Temperature

Not available

Precautions in connection with Fire

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures

Evacuate all unprotected personnel. Do not allow contact with skin and eyes. Do not breathe dust. It is essential to wear self-contained breathing apparatus (S.C.B.A) and full personal protective equipment and clothing to prevent exposure. Avoid exposure to spillage by sweeping up material avoiding dust generation or dampen spilled material with water to avoid airborne dust, then transfer material to suitable containers. Use absorbent paper dampened with water to pick up remaining material. Wash surfaces well with soap and water. Seal all wastes in labelled containers for subsequent recycling or disposal. Dispose of waste according to 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.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Toxic solid. Avoid exposure. Exposure without protection must be prevented. Wear appropriate personal protective equipment and clothing to prevent exposure. Use in designated areas with local exhaust ventilation. DO NOT store or use in confined spaces. Build up of dust/solid in the atmosphere must be prevented. Avoid breathing in solid/dust. Do not smoke. Maintain high standards of personal hygiene i.e. washing hands prior to eating, drinking, smoking or using toilet facilities.

Avoid exposure. Do not handle until all safety precautions have been read and understood. It is recommended that pregnant or breastfeeding women should not handle this product unless adequate exposure protection can be assured at all times. Female personnel planning pregnancy should be made aware of the potential risks.

Conditions for safe storage, including any incompatibilities

This material is Toxic and must be stored, handled and maintained according to the appropriate regulations. Limit quantity in storage. Restrict access to storage area. Post appropriate warning signs. Consider leak detection and alarm systems, as required. Structural materials and lighting and ventilation systems in storage area should be corrosion resistant. Store in a cool, dry, well-ventilated area away from sources of ignition, oxidizing agents, strong mineral acids, bases metal and/or water. Keep containers closed when not in use, securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Ensure that storage conditions comply with applicable local and national regulations.

For information on the design of the storeroom, reference should be made to Australian Standard AS/NZS 4452 The storage and handling of toxic substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

No exposure standards have been established for this material. However, the available exposure limits for ingredients are listed below:

Crystalline Silica

TWA: 0.2 mg/m³ (respirable dust)

Manganese, dust & compounds (as Mn)

TWA: 1 mg/m³

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.

Biological Limit Values

No biological limits allocated.

Appropriate Engineering Controls

This substance is toxic and should be used with a local exhaust ventilation system, drawing solid/dust away from workers' breathing zone. Alternatively, a process enclosure system such as a fume cupboard should be employed. If the engineering controls are not sufficient to maintain concentrations of particulates below the exposure standards, suitable respiratory protection must be worn. If local exhaust ventilation is used, ensure sufficient air is replaced to compensate the air that has been removed.

Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable dust/particulate filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. 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, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations. Eye protection 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. Occupational protective gloves should conform to relevant regulations. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form

Powder

Appearance

Powder

Colour

Black

Odour

Not available

Decomposition Temperature

Not available

Melting Point

Not available

Boiling Point

Not applicable

Solubility in Water

Insoluble

Solubility in Organic Solvents

Not available

Specific Gravity

4.40

pH

7.9 (20% slurry)

Vapour Pressure

Not applicable

Vapour Density (Air=1)

Not applicable

Evaporation Rate

Not available

Odour Threshold

Not available

Viscosity

Not available

Partition Coefficient: n-octanol/water

Not available

Flash Point

Not applicable

Flammability

Non-combustible solid.

Auto-Ignition Temperature

Not applicable

Explosion Limit - Upper

Not applicable

Explosion Limit - Lower

Not applicable

10. STABILITY AND REACTIVITY

Reactivity

Not available

Chemical Stability

Stable under normal conditions of storage and handling.

Reactivity and Stability

Not available

Conditions to Avoid

Extremes of temperature and direct sunlight. Dust accumulation.

Incompatible materials

Not available.

Hazardous Decomposition Products

Thermal decomposition may result in the release of toxic and/or irritating fumes.

Possibility of hazardous reactions

Not available

Hazardous Polymerization

Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information

No toxicity data available for this product.

Ingestion

Harmful if swallowed. Ingestion of this product may cause irritation to the mouth, throat, oesophagus and stomach with symptoms of nausea, abdominal discomfort, vomiting and diarrhoea.

Inhalation

Fatal if inhaled. Inhalation may cause headaches, impairment of judgement and in extreme cases can lead to unconsciousness or death. Repeated exposure to respirable crystalline silica dust may lead to silicosis, or other serious delayed lung injury. 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. Exposure by inhalation may aggravate pre-existing upper respiratory and lung disorders such as bronchitis, emphysema and asthma.

Skin

Skin contact may cause mechanical irritation resulting in redness and itching.

Eye

Causes serious eye irritation. On eye contact this product will cause tearing, stinging, blurred vision, and redness.

Respiratory sensitisation

Not expected to be a respiratory sensitiser.

Skin Sensitisation

Not expected to be a skin sensitiser.

Germ cell mutagenicity

Not considered to be a mutagenic hazard.

Carcinogenicity

May cause cancer by inhalation. Classified as a Known or presumed human carcinogen.

Respirable crystalline silica is classified by International Agency for Research on Cancer (IARC) as carcinogenic to humans by inhalation (Group 1).

Reproductive Toxicity

Suspected of damaging fertility or the unborn child. Classified as a suspected human reproductive or developmental toxicant. May cause harm to breast-fed children. Classified as a substance that produces toxic human reproductive or developmental effects on or via lactation.

STOT-single exposure

Not expected to cause toxicity to a specific target organ.

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure by inhalation.

Aspiration Hazard

Not expected to be an aspiration hazard.

Other Information

Chronic exposure to manganese dioxide can lead to manganese poisoning, called manganism. It is characterised by CNS effects including languor, sleepiness, weakness, a mask-like appearance of the face, emotional instability, spastic gait and anaemia. Repeated inhalation of manganese dioxide dust can cause manganese pneumonitis and increase susceptibility to pneumonia.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Harmful to terrestrial vertebrates.

Persistence and degradability

Not available

Mobility

Not available

Bioaccumulative Potential

Not available

Other Adverse Effects

Not available

Environmental Protection

Prevent this material entering waterways, drains and sewers.

13. DISPOSAL CONSIDERATIONS

Disposal considerations

The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations.

Product Disposal:

Product wastes are controlled wastes and should be disposed of in accordance with all applicable local and national regulations. This product can be disposed through a licensed commercial waste collection service. The product should be rendered non-hazardous before being sent to a licensed landfill facility.

Personal protective clothing and equipment as specified in Section 8 of this SDS must be worn during handling and disposal of this product. The ventilation requirements as specified in the same section must also be followed, and the precautions given in Section 7 of this SDS regarding handling must also be followed. Do not dispose directly into the sewerage system. Do not discharge into drains or watercourses or dispose where ground or surface waters may be affected.

In New Zealand, the disposal agency or contractor must comply with the New Zealand Hazardous Substances (Disposal) Regulations 2001. Further details regarding disposal can be obtained on the EPA New Zealand website under specific group standards.

Container Disposal:

The container or packaging must be cleaned and rendered incapable of holding any substance. It can then be disposed of in a manner consistent with that of the substance it contained. In this instance the packaging can be disposed through a commercial waste collection service.

Alternatively, the container or packaging can be recycled if the hazardous residues have been thoroughly cleaned or rendered non-hazardous.

In New Zealand, the packaging (that may or may not hold any residual substance) that is lawfully disposed of by householders or other consumers through a public or commercial waste collection service is a means of compliance with regulations.

14. TRANSPORT INFORMATION

Transport Information

This material is classified as Dangerous Goods Division 6.1 - Toxic substance

Must not be loaded in the same freight container or on the same vehicle with:

- Class 1: Explosives
- Food items

Note 1: Cyanides (Division 6.1) must not be loaded in the same freight container or on the same vehicle with acids (Class 8).

Must not be loaded with in the same freight container; and on the same vehicle must be separated horizontally by at least 3 metres unless all but one are packed in separate freight containers with:

- Division 5.1: Oxidising substances
- Division 5.2: Organic peroxides

Goods of packing group II or III may be loaded in the same freight container or on the same vehicle if transported in segregation devices with:

- Division 5.1: Oxidising substances
- Division 5.2: Organic peroxides
- Food items

Marine Transport (IMO/IMDG):

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN-No: 3288

Proper Shipping Name: TOXIC SOLID, INORGANIC, N.O.S. (Contains Pyrolusite)

Class: 6.1

Packaging Group: II

EMS No.: F-A, S-A

Special provisions: 274

Air Transport (ICAO/IATA):

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

UN-No: 3288

Proper Shipping Name: TOXIC SOLID, INORGANIC, N.O.S. (Contains Pyrolusite)

Class: 6.1

Packaging Group: II

Hazard Label: Toxic
Packaging Instructions (passenger & cargo): 669
Packaging Instructions (cargo only): 676
Special provisions: A3 A5

U.N. Number

3288

UN proper shipping name

TOXIC SOLID, INORGANIC, N.O.S.Pyrolusite

Transport hazard class(es)

6.1

Packing Group

II

Hazchem Code

2X

Special Precautions for User

Not available

IERG Number

34

IMDG Marine pollutant

No

Transport in Bulk

Not available

15. REGULATORY INFORMATION

Regulatory information

Classified as hazardous according to the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001, New Zealand.
Group Standard: Surface Coatings and Colourants (Toxic [6.1 + 6.7]) Group Standard 2006

HSNO Approval Number

HSR002671

16. OTHER INFORMATION

Date of preparation or last revision of SDS

SDS Reviewed: February 2016

Supersedes: July 2013

References

Workplace Exposure Standards and Biological Exposure Indices.

Transport of Dangerous goods on land NZS 5433.

Preparation of Safety Data Sheets - Approved Code of Practice Under the HSNO Act 1996 (HSNO CoP 8-1 09-06).

Assigning a hazardous substance to a group standard.

American Conference of Industrial Hygienists (ACGIH)

END OF SDS

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