



Material Safety Data Sheet

Magnetite

SUPPLIER DETAILS

Supplier Name:	Palabora Copper (Pty) Ltd PO Box 65 1 Copper Road Phalaborwa, 1390 South Africa	Emergency Telephone Number:	+27 (0)15 780 2666
Address:	Phalaborwa, 1390 South Africa	E-Mail Address:	palabora.msds@palabora.co.za
Personal Responsible for Updating MSDS:	Manager: Environment & SHEQ MS	Telephone Number:	+27 (0)15 780 2911
		URL / WebPages:	http://www.palabora.com/

1. PRODUCT IDENTIFICATION

Chemical Names and Synonyms: Black Iron Oxide; Magnetic Iron Oxide; Ferrous Ferric Oxide	EINECS Number: 215-277-5 / 215-169-8
CAS Number: 1317-61-9/ 1309-38-2	NIOSH Number: NA

2. COMPOSITION

Iron Oxide (Fe₃O₄) : 60 - 100%

3. HAZARDOUS IDENTIFICATION

Inhalation: May cause irritation to the respiratory tract. Symptoms may include coughing and shortness of breath.
 Ingestion: Extremely large oral dosages may produce gastrointestinal disturbances.
 Skin Contact: No adverse effects expected.
 Eye Contact: May cause mechanical irritation.
 Chronic Exposure: Long-term inhalation exposure to iron has resulted in mottling of the lungs, a condition referred to as siderosis. This is considered a benign pneumoconiosis and does not ordinarily cause significant physiological impairment.
 Not classifiable as a human carcinogen.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.
 Ingestion: If large amounts were swallowed, give water to drink and get medical advice.
 Skin Contact: Wash exposed area with soap and water. Get medical advice if irritation develops.
 Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Fire: Not expected to be a fire hazard.
 Explosion: No information found.
 Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.
 Special Information: In the event of a fire, wear full protective clothing and approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

7. HANDLING AND STORAGE

Keep in a closed container or use alternative method to prevent material from becoming airborne. Stored in a cool, dry, ventilated area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne Exposure Limits: - ACGIH Threshold Limit Value (TLV) - 5 mg/m³ (TWA).

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits.

Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit, for emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator.

Eye Protection:

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Black powder.
 Odor: odorless.
 Solubility: Negligible (< 0.1%)
 Specific Gravity: 5.18

10. STABILITY AND REACTIVITY

Stability: Stable under ordinary conditions of use and storage.
 Hazardous Decomposition Products: No information found.
 Hazardous Polymerization: Will not occur.
 Incompatibilities: Carbon monoxide, hydrazine, calcium hypochloride, performic acid, bromine pentafluoride.
 Conditions to Avoid: Incompatibles.

11. TOXICOLOGICAL INFORMATION

Additional toxicology:
 Solmonella typhirmurium mutagenicity: Not mutagenic at extract concentrations < 4 000g/l
 From (Xenopus laevis) embryo teratogenicity: 48 h ECo: 250 g/l, 48 h EC50L: > 2 000 g/l

12. ECOLOGICAL INFORMATION

Ecotoxicity:
 Daphnia pulex lethality: 48 h ECo: > 50 g/l, 48 h EC50: > 50 g/l
 Algal (Selenastrum capricornutum) growth inhibition: 72 h ECo: > 50 g/l, 72 h EC50: > 50 g/l
 Bacterial (Pseudomonas putida) growth inhibition: 6 h ECo: > 50 g/l, 6 h EC50: > 50 g/l
 Frog (Xenopus laevis) embryo lethality: 48 h ECo: > 50 g/l, 48 h EC50: > 50 g/l

13. DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

Not regulated.

15. REGULATORY INFORMATION

Risk Phrases R36/R37/R38 Irritating to eyes, respiratory system and skin
 Safety Phrases S26 In case of contact with eyes, rinse immediately with plenty of water

16. OTHER INFORMATION

None.

DISCLAIMER

All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors or omissions or the consequences thereof. It is the user's obligation to determine the conditions of safe use of the material, all risks of use of the product are therefore assumed by the user and we expressly disclaim all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the product.