

Saehan Media

Material Safety Data Sheet

Date / Revised: June/10/2004

Product: **Magnetite for Toner**

1. Product and Company Identification

Synonyms: Black Iron Oxide; Magnetic Iron Oxide; Ferrous Ferric Oxide, C.I. 77491; Iron Sesquioxide
Molecular Weight: 159.69 / 231.55
Chemical Formula: Fe₂O₃ / Fe₃O₄
Product Name: SMT-01S / SMT-2000 / SMT-02H

Company

Saehan Media Co., LTD
Saehan Building 254-8, Kongduk-Dong, Mapo-Gu, Seoul, Korea 121-710
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Emergency information

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2. Composition/Information on Ingredients

INGREDIENT NAME	EINECS No.	CAS No.	Contents	Risk
Iron Oxide, Fe ₃ O ₄	215-277-5	1317-61-9	60 - 95%	No.
Iron Oxide, Fe ₂ O ₃	215-166-2	1309-37-1	5 - 40%	No.

3. Hazards 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.

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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.
Long term eye exposures may stain the eyes and leave a "rust ring."

Aggravation of Pre-existing Conditions: Persons with impaired respiratory function may be more susceptible to the effects of the substance.

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 NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: 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 tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

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8. Exposure Controls/Personal Protection

Airborne Exposure Limits: - OSHA Permissible Exposure Limit (PEL) -

Iron oxide fume: 10 mg/m³- ACGIH Threshold Limit Value (TLV) -

Iron oxide dust and fume (Fe₂O₃) as Fe:

5 mg/m³ (TWA), inhalable particulate; for particulate matter containing no asbestos and < 1% crystalline silica. A4 - Not classifiable as a human carcinogen.

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. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator.

WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear protective gloves and clean body-covering clothing.

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

PH: 6.5 - 10.0

Appearance density: 0.3 ~ 1.0 g/ml

Boiling Point: No information found.

Melting Point: 1,589~1,599 °C (2,892~2,910 °F)

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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

No LD50/LC50 information found relating to normal routes of occupational exposure. Investigated as a tumorigen.

Ingredient	\ Cancer Lists \		IARC Category
	Known	Anticipated	
Iron Oxide, Fe ₃ O ₄ (1317-61-9)	No	No	3
Iron Oxide, Fe ₂ O ₃ (1309-37-1)	No	No	3

12. Ecological Information

Environmental Fate: No information found.
Environmental Toxicity: No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

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15. Regulatory Information

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

16. Other Information

This material is not classed as "Dangerous" according to the health and physical properties criteria of the EU Directives on the classification of substances and preparations.

Prepared by: SAEHANMEDIA CORP.