

Material Safety Data Sheet

Name: Iron Oxide Black
Synonym: Iron Oxide; Magnetite; Ferric(ous) Oxide.
CAS: 12227-89-3

➤ Section 1 - Chemical Product

MSDS Name: Iron Oxide Black

Synonym: Iron Oxide; Magnetite; Ferric(ous) Oxide.

➤ Section 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	content	EINECS#
12227-89-3	IRON OXIDE BLACK	100	235-442-5

Hazard Symbols: None Listed.

Risk Phrases: None Listed.

➤ Section 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

The toxicological properties of this material have not been fully investigated.

Potential Health Effects

Eye:

May cause eye irritation. Exposure to iron particles may cause toxic effects.

Skin:

May cause skin irritation.

Ingestion:

May cause gastrointestinal irritation with nausea, vomiting and diarrhea. The toxicological properties of this substance have not been fully investigated.

Inhalation:

May cause respiratory tract irritation. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count. The toxicological properties of this substance have not been fully investigated.

Chronic:

No information found.

👉 **Section 4 - FIRST AID MEASURES**

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:

Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion:

If victim is conscious and alert, give 2-4 cupfuls of milk or water.

Get medical aid immediately.

Inhalation:

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

👉 **Section 5 - FIRE FIGHTING MEASURES**

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Combustion generates toxic fumes.

Extinguishing Media:

Use extinguishing media most appropriate for the surrounding fire.

👉 **Section 6 - ACCIDENTAL RELEASE MEASURES**

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions.

👉 **Section 7 - HANDLING and STORAGE**

Handling:

Wash thoroughly after handling. Use with adequate ventilation.

Minimize dust generation and accumulation. Avoid contact with skin and eyes. Keep container tightly closed. Avoid ingestion and inhalation.

Storage:

Store in a cool, dry, well-ventilated area away from incompatible substances.

👉 **Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION**

Engineering Controls:

Use adequate ventilation to keep airborne concentrations low.

Exposure Limits CAS# 12227-89-3: Personal Protective Equipment Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA' 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to minimize contact with skin.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

👉 **Section 9 - PHYSICAL AND CHEMICAL PROPERTIES**

Physical State: Solid

Color: black

Odor: none reported

pH: Not available.

Vapor Pressure: Not applicable.

Viscosity: Not available.

Boiling Point: Not applicable.

Freezing/Melting Point: 2892 deg F

Autoignition Temperature: Not available.

Flash Point: Not available.

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature: Not available.

Solubility in water: Insoluble in water.

Specific Gravity/Density: 5.18 (water=1)

Molecular Formula: Fe₃O₄

Molecular Weight: 231.5386

➤ **Section 10 - STABILITY AND REACTIVITY**

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

High temperatures, incompatible materials.

Incompatibilities with Other Materials:

Aluminum, calcium hypochlorite, cesium carbide, chloroformates, ethylene oxide, peroxides.

Hazardous Decomposition Products:

Irritating and toxic gases.

Hazardous Polymerization: Has not been reported

➤ **Section 11 - TOXICOLOGICAL INFORMATION**

RTECS#:

CAS# 1 2 2 2 7 - 8 9 - 3 unlisted.

LD50/LC50:

Not available.

Carcinogenicity:

IRON OXIDE - Not listed by ACGIH, IARC, or NTP.

➤ **Section 12 - ECOLOGICAL INFORMATION**

Other No information available.

➤ **Section 13 - DISPOSAL CONSIDERATIONS**

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

➤ **Section 14 - TRANSPORT INFORMATION**

IATA

Not regulated as a hazardous material.

IMO

Not regulated as a hazardous material.

RID/ADR

Not regulated as a hazardous material.

➤ **Section 15 - REGULATORY INFORMATION**

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available.

Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 1 2 2 2 7 - 8 9 - 3 : 0

China

CAS# 1 2 2 2 7 - 8 9 - 3 is listed on Canada's DSL List.

CAS# 1 2 2 2 7 - 8 9 - 3 is not listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 1 2 2 2 7 - 8 9 - 3 is listed on the TSCA inventory.

➤ **Section 16 - OTHER INFORMATION**

The information is based on our present state of knowledge, it should not therefore be construed as guaranteeing specific properties of the products described or their suitability for a particular application.
