

MATERIAL SAFETY DATA SHEET

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Section 1 - Product Name

Material Name: Graphite Electrode
Application: Metal production

Section 2 - Composition and Information On Ingredients

Single substance or mixture: Single substance
Common chemical name (generic name): Carbon
Content: 99.0% or higher
Chemical formula: C
CAS number: 7782-42-5

Section 3 - Hazards Identification

Adverse human health effects: Handling of the material at a high dust concentration may cause pneumoconiosis.
Environmental effects: No data available
Physical and chemical hazards: Not applicable
Specific hazards: Not applicable
Classification of chemical product: The material does not meet the criteria for classification.

Section 4 - First Aid Measures

Inhalation Skin contact: Gargle with water, and thoroughly rinse out mouth.
Skin contact: Thoroughly wash with soap. If contamination persists, apply a cleansing cream and wipe it off with a soft cloth.
Eye contact: Do not rub eyes. Immediately flush eyes with running water for at least 15 minutes, and carefully wash eyes. If any abnormal symptoms occur, obtain medical attention.
Ingestion: Induce vomiting using fingers or the like. If ingested, it will be excreted naturally from the body.
Brief description of the most important symptoms: If any eye disorder occurs, immediately obtain medical attention.

Section 5 - Fire Fighting Measures

Extinguishing media: Water, CO₂, sand.
Specific methods of fire-fighting and special equipment: Extinguish the fire with water or dry chemicals in the same manner as with a general fire.
Protection of firefighters: Follow the handling procedures related to the extinguishing media.

Section 6 - Accidental Release Measures

Personal precautions: Wear personal protective equipment. Handle the material with due care not to inhale it.
Environmental precautions: No data
Methods for cleaning up: Vacuum or sweep-up the spill while minimizing dust emission, then place in a container.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Technical measures: Provide a local ventilation system in facilities for handling operations such as transportation, storage, and use. Emitted dust must be removed at its source.

Precautions: The material consists of a fine powder. Preferably wear protective equipment such as rubber gloves, dust preventive mask, and dust-proof goggles to protect skin and eyes.

Safe handling advice: Take care to avoid cuts from broken pieces.

7.2. Conditions for safe storage, including any incompatibilities

Appropriate storage conditions: In storage places where the material is stored in large quantities, do not use a naked flame or machinery that could generate ignition sources such as sparks and arcs.

Safe packaging materials: Store the material away from rain water or other sources of moisture.

Section 8 - Exposure Control/Personal Protection

Engineering measures to reduce exposure: Local ventilation system, general ventilating equipment

Exposure guidelines: 2.9 mg/m³

ACGIH (2005) : 10 mg/m³ (Inhalable dust)
3mg/m³ (Total dust)

Personal protective equipment

Respiratory protection: Wear dust preventive mask.

Hand protection: Preferably wear vinyl or rubber gloves.

Eye protection: Preferably wear dust-proof goggles.

Skin and body protection: Preferably wear protective clothing, protective boots, and protective apron.

Section 9 - Physical and Chemical Properties

Physical state: Single substance

Appearance: Solid

Color: Black

Odor: Odorless

pH: Not applicable

Specific temperatures/temperature ranges at which changes in physical state occur

Boiling point: Not applicable

Boiling range: Not applicable

Decomposition temperature: Carbon causes oxidation at 600°C or higher.

Flash point: Does not flash

Vapor density: Negligible

Density: 1.4 to 1.9

Solubility

Water: Insoluble

Other solvents: Insoluble or poorly soluble in general solvents.

Section 10 - Stability and Reactivity

Stability: The material is stable under normal handling conditions.

Reactivity: The material has no autoreactivity.

Hazardous decomposition products: Imperfect combustion of the material may generate carbon monoxide.

Section 11 - Toxicological Information

Acute toxicity: No data

Eyes: At high dust levels, mechanical irritation

Chronic Toxicity or long term toxicity: Breathing and repeated over-exposure lead to benign pneumoconiosis.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Follow the precautions regarding accidental release, handling, and storage, and general precautions regarding combustible materials. Dispose of the material by incineration with an incinerator or landfill. Land filling must be conducted in a manner pursuant to municipal laws and the Waste Disposal and Public Cleansing Law.

Note: When disposing of the product outside Japan, conform to applied laws and regulations in that country or territory.

Section 14 - Transport Information

International regulations for transport.

IMDG code: Not applicable

ICAO-TI / IATA-DGR: Not applicable

UN hazard class: Not applicable

UN number: Not applicable

Additional regulations: None

Specific precautionary transport measures and conditions: When loading or unloading the containers, park the vehicle on level ground, apply the parking brake and other holding devices, and load or unload the containers with a fork lift.

Securely fix the containers on the loading platform to prevent load shifting and breakage of bags during transportation. As to transportation, follow related laws and regulations, such as the Road Traffic Law.

Note: When transporting the product outside Japan, conform to applied laws and regulations in that country or territory.

Section 15 - Regulatory Information

When using the product, it must be handled in accordance with applied laws and regulations in the country or territory.

Section 16 - Other Information

This information and recommendations set forth herein are taken from sources believed to be accurate as of the date herein; however, we makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability to any user thereof.