



SAFETY DATA SHEET

1. Identification

Product identifier Graphite Electrode – All Grades
Recommended use For Industrial Use Only
Electric furnace steel production.
Recommended restrictions None Known.

Manufacturer/Supplier information

Company name: FRC Global
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Product Support/Technical Services
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2. Hazard(s) identification

Classified Hazards The item is defined as an article per OSHA (29 CFR 1910.1200) and is therefore exempt from labeling. A Safety Data Sheet is available. This item is not hazardous per OSHA 29 CFR 1910.1200(c). However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. May cause respiratory irritation, lung injury, or cancer by inhalation. Limit skin contact. Wash hands after handling. Dispose of waste and residues in accordance with local authority requirements. Wear protective gloves, protective clothing, and eye protection.

Physical hazards None classified.
Health hazards None classified.
Environmental hazards None classified.

Label Elements

Hazard Symbol None.
Signal Word None.
Hazard Statement This substance does not meet the criteria for classification.
Precautionary statements

Prevention Observe good industrial hygiene practices.
Response Wash hands after handling.
Storage Store away from incompatible materials.
Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise Classified (HNOC)

None Known.

Supplemental information

None.

3. Composition/information on ingredients

<i>Chemical Name</i>	<i>Common Name/Synonyms</i>	<i>CAS Number</i>	<i>%</i>
Carbon Graphite		7782-42-5	>99

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Direct contact with the eyes may cause temporary irritation. Coughing.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep the victim under observation. Symptoms may be delayed.

General information

If concerned: Get medical advice. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon Dioxide (CO₂)

Unsuitable extinguishing media

Do not use a water jet as an extinguisher, it could spread the fire.

Specific hazards arising from the chemical

During a fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures

Keep unnecessary personnel away. For personal protection, see Section 8 of the SDS.

Methods and materials for containment and cleaning up

The product is immiscible with water and will sediment in water systems. Stop the flow of material if this is without risk. Following product recovery, flush the area with water. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses, or onto the ground.

7. Handling and storage

Precautions for safe handling Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in the original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US ACGIH Threshold Limit Values

<i>Components</i>	<i>Type</i>	<i>Value</i>	<i>Form</i>
Carbon Graphite (CAS 7782-42-5)	TWA	2 mg/m ³	Respirable fraction.

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

<i>Components</i>	<i>Type</i>	<i>Value</i>	<i>Form</i>
Carbon Graphite (CAS 7782-42-5)	TWA	2 mg/m ³	Respirable.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health & Safety Regulation 296/97, as amended)

<i>Components</i>	<i>Type</i>	<i>Value</i>	<i>Form</i>
Carbon Graphite (CAS 7782-42-5)	TWA	2 mg/m ³	Respirable.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety & Health Act)

<i>Components</i>	<i>Type</i>	<i>Value</i>	<i>Form</i>
Carbon Graphite (CAS 7782-42-5)	TWA	2 mg/m ³	Respirable fraction.

Canada. Ontario OELs (Control of Exposure to Biological or Chemical Agents)

<i>Components</i>	<i>Type</i>	<i>Value</i>	<i>Form</i>
Carbon Graphite (CAS 7782-42-5)	TWA	2 mg/m ³	Respirable fraction.

Canada. Quebec OELs (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

<i>Components</i>	<i>Type</i>	<i>Value</i>	<i>Form</i>
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Carbon Graphite (CAS 7782-42-5)	TWA	2 mg/m ³	Respirable dust.
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Biological limit values	No biological exposure limits were noted for the ingredient(s).
Exposure guidelines	The resin binder in this product was specifically engineered to have low toxicity, with minimal free-phenol (less than 100ppm in this refractory product) and no free-formaldehyde. Under certain conditions, thermal decomposition products may still include carbon monoxide, carbon dioxide, formaldehyde, phenol, and aromatic and/or aliphatic compounds.
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment	
Eye/face protection	If contact is likely, safety glasses with side shields are recommended.
Skin protection	
Hand protection	Wear appropriate protective gloves.
Respiratory protection	Use a NIOSH/MSHA-approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General Hygiene Considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Solid.
Form	Solid.
Color	Black.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	< 2760°C/Not applicable.
Initial boiling point and boiling range	
	Not available.
Flash point	Not available.

Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Bulk-density sand products	Not available.
Solubility(ies)	
Solubility (water)	Insoluble in water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage, and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction is known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Chlorine.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No long-term effect on the respiratory system is expected.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with the eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical, and toxicological characteristics:

Direct contact with the eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

<i>Components</i>	<i>Species</i>	<i>Test Results</i>
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Carbon Graphite
(CAS 7782-42-5)
Oral: LD50

Rat

> 10000 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation

Direct contact with the eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization

Not a respiratory sensitizer.

Skin sensitization

This product is not expected to cause skin sensitization.

Germ cell mutagenicity

No data is available to indicate product, or any components present at greater than 0.1% are mutagenic or genotoxic.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure

Not classified.

Specific target organ toxicity - repeated exposure

Not classified.

Aspiration hazard

Not an aspiration hazard.

12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous.

Persistence and degradability

No data is available on the degradability of this product.

Bio-accumulative potential

No data available.

Mobility in soil

The product is insoluble in water.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site.

Local Disposal Regulations

Dispose of it in accordance with all applicable regulations.

Hazardous waste code

The waste code should be assigned in discussion between the user, the producer, and the waste disposal company.

Waste from residues / unused products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of safely (see Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after the container is emptied.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
Bulk Transport	Not applicable.

15. Regulatory information

Canadian regulations

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations Not regulated.

International regulations Stockholm Convention

Not applicable.

Rotterdam Convention Not applicable.

Kyoto Protocol Not applicable.

Montreal protocol Not applicable.

Basel Convention Not applicable.

16. Other information, including date of preparation or last revision

This information is supplied to be informative and to alert the user of the material. The ultimate compliance with federal, state, and/or local regulations concerning the use of this material, or compliance with respect to product liability, rests solely upon the purchaser thereof.

Reasons for Revision: Converted MSDS to SDS.
Prepared by: FRC Global
Date: February 2018

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End of Safety Data Sheet