

## SAFETY DATA SHEET

Creation Date 29-Aug-2014

Revision Date 17-Jan-2018

Revision Number 3

### 1. Identification

**Product Name** Graphite Powder

**Cat No. :** G67-500

**CAS-No** 7782-42-5  
**Synonyms** mineral carbon; crystallized carbon; Black lead

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Not for food, drug, pesticide or biocidal product use

#### Details of the supplier of the safety data sheet

##### Company

Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

##### **Emergency Telephone Number**

CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

### 2. Hazard(s) identification

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|  |             |
|--|-------------|
| Serious Eye Damage/Eye Irritation                    | Category 2  |
| Carcinogenicity                                      | Category 1A |
| Specific target organ toxicity (single exposure)     | Category 3  |
| Target Organs - Respiratory system.                  |             |
| Specific target organ toxicity - (repeated exposure) | Category 2  |
| Target Organs - Lungs.                               |             |

#### Label Elements

##### **Signal Word**

Danger

##### **Hazard Statements**

Causes serious eye irritation  
May cause cancer by inhalation  
May cause respiratory irritation  
May cause damage to organs through prolonged or repeated exposure



### Precautionary Statements

#### Prevention

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Use personal protective equipment as required  
 Wash face, hands and any exposed skin thoroughly after handling  
 Wear eye/face protection  
 Avoid breathing dust/fume/gas/mist/vapors/spray  
 Use only outdoors or in a well-ventilated area

#### Response

IF exposed or concerned: Get medical attention/advice

#### Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

#### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 If eye irritation persists: Get medical advice/attention

#### Storage

Store locked up  
 Store in a well-ventilated place. Keep container tightly closed

#### Disposal

Dispose of contents/container to an approved waste disposal plant

#### Hazards not otherwise classified (HNOC)

**WARNING.** Cancer - <https://www.p65warnings.ca.gov/>.

### 3. Composition/Information on Ingredients

| Component | CAS-No     | Weight % |
|-----------|------------|----------|
| Graphite  | 7782-42-5  | > 99     |
| Quartz    | 14808-60-7 | < 1      |

### 4. First-aid measures

|  |   |
|--|---|
| <b>Eye Contact</b>                         | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. |
| <b>Skin Contact</b>                        | Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.     |
| <b>Inhalation</b>                          | Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.             |
| <b>Ingestion</b>                           | Do not induce vomiting. Get medical attention if symptoms occur.  |
| <b>Most important symptoms and effects</b> | No information available.   |
| <b>Notes to Physician</b>                  | Treat symptomatically   |

### 5. Fire-fighting measures

**Suitable Extinguishing Media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable Extinguishing Media** No information available

**Flash Point** No information available  
**Method -** No information available

**Autoignition Temperature** 730 °C / 1346 °F

**Explosion Limits**

**Upper** No data available  
**Lower** No data available  
**Sensitivity to Mechanical Impact** No information available  
**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**

Carbon monoxide (CO) Carbon dioxide (CO<sub>2</sub>)

**Protective Equipment and Precautions for Firefighters**

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

**NFPA**

|               |                     |                    |                         |
|---------------|---------------------|--------------------|-------------------------|
| <b>Health</b> | <b>Flammability</b> | <b>Instability</b> | <b>Physical hazards</b> |
| 2             | 1                   | 0                  | N/A                     |

## 6. Accidental release measures

**Personal Precautions** Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing.

**Environmental Precautions** Avoid release to the environment.

**Methods for Containment and Clean Up** Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

## 7. Handling and storage

**Handling** Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothing.

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

| Component | ACGIH TLV                    | OSHA PEL   | NIOSH IDLH   | Mexico OEL (TWA)           |
|-----------|------------------------------|--|--|----------------------------|
| Graphite  | TWA: 2 mg/m <sup>3</sup>     | (Vacated) TWA: 2.5 mg/m <sup>3</sup><br>(Vacated) TWA: 10 mg/m <sup>3</sup><br>(Vacated) TWA: 5 mg/m <sup>3</sup><br>TWA: 15 mg/m <sup>3</sup><br>TWA: 5 mg/m <sup>3</sup> | IDLH: 1250 mg/m <sup>3</sup><br>TWA: 2.5 mg/m <sup>3</sup> | TWA: 2 mg/m <sup>3</sup>   |
| Quartz    | TWA: 0.025 mg/m <sup>3</sup> | (Vacated) TWA: 0.1 mg/m <sup>3</sup><br>TWA: 50 µg/m <sup>3</sup>  | IDLH: 50 mg/m <sup>3</sup><br>TWA: 0.05 mg/m <sup>3</sup>  | TWA: 0.1 mg/m <sup>3</sup> |

*Legend*

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: *The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health*

**Engineering Measures** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal Protective Equipment

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** 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.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

|   |                                     |
|---|-------------------------------------|
| <b>Physical State</b>                         | Solid                               |
| <b>Appearance</b>                             | Greenish-blue                       |
| <b>Odor</b>                                   | Odorless                            |
| <b>Odor Threshold</b>                         | No information available            |
| <b>pH</b>                                     | No information available            |
| <b>Melting Point/Range</b>                    | 3652.2 - 3697.2 °C / 6606 - 6687 °F |
| <b>Boiling Point/Range</b>                    | 4200 °C / 7592 °F                   |
| <b>Flash Point</b>                            | No information available            |
| <b>Evaporation Rate</b>                       | No information available            |
| <b>Flammability (solid,gas)</b>               | No information available            |
| <b>Flammability or explosive limits</b>       |                                     |
| <b>Upper</b>                                  | No data available                   |
| <b>Lower</b>                                  | No data available                   |
| <b>Vapor Pressure</b>                         | negligible                          |
| <b>Vapor Density</b>                          | No information available            |
| <b>Specific Gravity</b>                       | 2.09 - 2.25                         |
| <b>Solubility</b>                             | Insoluble in water                  |
| <b>Partition coefficient; n-octanol/water</b> | No data available                   |
| <b>Autoignition Temperature</b>               | 730 °C / 1346 °F                    |
| <b>Decomposition Temperature</b>              | No information available            |
| <b>Viscosity</b>                              | No information available            |
| <b>Molecular Formula</b>                      | C                                   |
| <b>Molecular Weight</b>                       | 12                                  |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactive Hazard</b>                  | None known, based on information available              |
| <b>Stability</b>                        | Stable under normal conditions.                         |
| <b>Conditions to Avoid</b>              | Avoid dust formation. Excess heat.                      |
| <b>Incompatible Materials</b>           | No information available                                |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ) |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.                |
| <b>Hazardous Reactions</b>              | None under normal processing.                           |

## 11. Toxicological information

### Acute Toxicity

**Product Information** No acute toxicity information is available for this product

**Component Information**

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** Irritating to eyes and respiratory system

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component | CAS-No     | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-----------|------------|------------|------------|------------|------------|------------|
| Graphite  | 7782-42-5  | Not listed |
| Quartz    | 14808-60-7 | Group 1    | Known      | A2         | X          | Not listed |

*IARC: (International Agency for Research on Cancer)*

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*Group 1 - Carcinogenic to Humans*

*Group 2A - Probably Carcinogenic to Humans*

*Group 2B - Possibly Carcinogenic to Humans*

*NTP: (National Toxicity Program)*

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*Known - Known Carcinogen*

*Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen*

*ACGIH: (American Conference of Governmental Industrial Hygienists)*

*A1 - Known Human Carcinogen*

*A2 - Suspected Human Carcinogen*

*A3 - Animal Carcinogen*

*ACGIH: (American Conference of Governmental Industrial Hygienists)*

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system

**STOT - repeated exposure** Lungs

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** No information available

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available.

**Mobility** No information available.

### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

**DOT** Not regulated  
**TDG** Not regulated  
**IATA** Not regulated  
**IMDG/IMO** Not regulated

### 15. Regulatory information

**All of the components in the product are on the following Inventory lists:** Australia X = listed China Canada Europe TSCA Korea Philippines

#### International Inventories

| Component | TSCA | DSL | NDSL | EINECS    | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|-----------|------|-----|------|-----------|--------|-----|-------|------|------|-------|------|
| Graphite  | X    | X   | -    | 231-955-3 | -      |     | X     | -    | X    | X     | X    |
| Quartz    | X    | X   | -    | 238-878-4 | -      |     | X     | X    | X    | X     | X    |

#### Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

#### U.S. Federal Regulations

**TSCA 12(b)** Not applicable

**SARA 313** Not applicable

**SARA 311/312 Hazard Categories** See section 2 for more information

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA Occupational Safety and Health Administration**  
Not applicable

| Component | Specifically Regulated Chemicals                              | Highly Hazardous Chemicals |
|-----------|---|----------------------------|
| Quartz    | 50 µg/m <sup>3</sup> TWA<br>25 µg/m <sup>3</sup> Action Level | -                          |

**CERCLA** Not applicable

**California Proposition 65** This product contains the following proposition 65 chemicals

| Component | CAS-No     | California Prop. 65 | Prop 65 NSRL | Category   |
|-----------|------------|---------------------|--------------|------------|
| Quartz    | 14808-60-7 | Carcinogen          | -            | Carcinogen |

**U.S. State Right-to-Know Regulations**

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-----------|---------------|------------|--------------|----------|--------------|
| Graphite  | X             | X          | X            | -        | X            |
| Quartz    | X             | X          | X            | X        | X            |

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

## 16. Other information

**Prepared By** Regulatory Affairs  
 Thermo Fisher Scientific  
 Email: EMSDS.RA@thermofisher.com

**Creation Date** 29-Aug-2014  
**Revision Date** 17-Jan-2018  
**Print Date** 17-Jan-2018  
**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**