

Bay Carbon, Inc.

PO Box 205, 800 Marquette Street, Bay City, MI 48706 USA

Phone No.: 989-686-8090 Fax No.: 989-8686-0920

www.baycarbon.com, e-mail address: baycarbon@baycarbon.com

Safety Data Sheet

Updated: 09-24-15

SECTION 1

MANUFACTURER'S NAME AND CONTACT INFORMATION

(See above)

SECTION 2 - Product and Supplier Identification

Product Identifier used:	Carbon/Graphite Powder/Pellets
Other Means of Identification:	See list of products/grades in Section 17
Uses (and restrictions):	Customer applications for specialty carbon/graphite products in powder, granular, or pellet form.

SECTION 3 – Hazard Identification

Classification:

This material is not classified as hazardous under the Globally Harmonized System of Classification and Labeling and the US OSHA Hazard Communication Standard.

Signal word, symbols, hazards and

Insoluble Not applicable (because not classified as hazardous)

Other information about health hazards:

Dust may cause minor irritation of skin and eyes, primarily through mechanical abrasion. Repeated or prolonged, especially as an aggravation to a pre-existing condition. Avoid creating and breathing airborne dust.

Appearance: Other information about physical hazards:

Carbon/graphite dust is electrically conductive and dust accumulations on electrical equipment can cause short circuits resulting in electrical shock, fire or damage to equipment. Graphite dust may create slippery conditions. Accumulations of dust may present a combustible dust hazard. Maintain good housekeeping.

SECTION 4 – Composition

Component	CAS Registry Number	Concentration % by weight
Graphite	7782-42-5	0-100%
Crystalline Silica	14808-60-7	0-100%

Material	Percent	ACGIH (TLV)	OSHA (PEL)
Graphite	>99.7	2.0 MG/MS RESPIRABLE	2.5 MG/M3 RESPIRABLE
Crystalline Silica	<0.3	0.05 MG/M3 RESPIRABLE	10 _____ % S102 + 2 RESPIRABLE

SECTION 5 - First Aid Measures

Inhalation: Remove affected personnel to an exposure-free environment. Wash skin with soap
Skin and eye contact: Water.
Ingestion:

Indication of need for immediate medical attention and special treatment: If breathing is difficult, oxygen may be administered, seek medical attention. If breathing has stopped, artificial respiration should be started. Seek medical attention.

SECTION 6 - Fire Fighting Measures

Carbon/graphite powders are combustible

Suitable extinguishing media:
Use an extinguisher that is suitable for the surrounding fire. Dusts are combustible- Use water, Carbon Dioxide, dry chemical or foam.

Combustion Hazards:
When burned, carbon/graphite release carbon dioxide (and possible carbon monoxide if there is not enough oxygen for complete combustion).

Special fire-fighting procedures;
Use protective clothing and breathing equipment appropriate to the surrounding fire. Material in or near fires should be cooled with a water spray or fog. A self-contained breathing apparatus, operating in the positive pressure mode should be worn for combating fires.

Unusual fire and explosion hazards:

As is the case with any combustible dust, concentration of airborne carbon/graphite powder can present a dust explosion hazard. Practice good housekeeping to prevent dust accumulation and prevent situations where substantial amounts of dust can become airborne. Thermal decomposition or combustion may produce smoke, oxides of Carbon and low molecular weight organic compounds whose composition has not been characterized.

Flash point: Not applicable

Flammable limits: Not applicable

SECTION 7- Accidental Release Measures

Sweep or vacuum spilled material and place into sealable containers. Avoid creating and breathing airborne dust. Dispose in accordance with applicable waste disposal regulations.

SECTION 8- Handling and storage

Store in labeled closed containers away from heat, spark, open flames, & other sources of ignition. Do not store with or near incompatible chemicals cited in section 11. Do not let containers of material accumulate in the workplace. Avoid creating and breathing airborne dust. Practice good hygiene. As good practice, wash hands before eating, drinking or smoking and do not store food, or eat or drink, in areas where chemicals are handled. Any dusts generated during handling or processing should be cleaned up by wet mopping or vacuuming with a unit which contains a Hepa filter. Dry sweeping can suspend particulate matter in the atmosphere.

SECTION 9- Exposure Controls and personal Protection

Exposure limits and guidelines:

Material	OSHA PEL 8-Hr TWA	ACGIH TLV 8-Hr TWA
Graphite	15 mg/m ³ (total) 5 mg/m ³ (respirable)	2.0 mg/m ³ (respirable)
Crystalline Silica	0.05 mg/m ³ (total) (respirable)	% S102 + 2 (respirable)

Other jurisdiction may have different exposure limits and control guidelines. Users are advised to consult and comply with local regulations.

Engineering controls:

Use good housekeeping practices. Use general or local exhaust ventilation, if necessary, to reduce concentrations of airborne contaminants.

Personal protective equipment:

Use NIOSH-approved respiratory protective equipment (for example, an N-95 dust mask) if exposures exceed established limits. Protective glasses with side shields should be worn to prevent eye contact with particulate matter. Protective gloves are recommended to prevent cuts, abrasions, and irritation during handling and processing. Normal work clothes may become soiled by dusts, coveralls are recommended. Wash soiled clothing before reuse.

General hygiene considerations:

As good practice, wash hands before eating, drinking or smoking and do not store food, or eat or drink, in areas where chemicals are handled.

SECTION 10 – Physical and Chemical Properties

Appearance:	Silver, flexible sheet shapes.	Odor:	Slight Hydrocarbon
Odor Threshold:	Not applicable	pH:	Not applicable
Melting point:	>5000 DEG. F.	Boiling Point:	Not applicable
Flash Point:	Not applicable	Evaporation rate:	Not applicable
Flammability:	Not applicable	LEL/UEL:	Not applicable
Vapor pressure:	Not applicable	Vapor density:	Not applicable
Relative density:	Not applicable	Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not applicable	Autoignition:	Very high
Decomposition Temperature:	Not applicable	Viscosity:	Not applicable

SECTION 11- Stability and Reactivity

This material is stable and non-reactive

Stability:	Stable
Hazardous Polymerization:	Will Not Occur
Incompatibility (Materials to Avoid):	Avoid Strong Oxidizing Agents.

SECTION 12- Toxicology Information

Effects of Overexposure

Acute:

High concentration of Graphite dusts may be irritating to the eyes, skin, mucous membranes, and respiratory tract.

Chronic:

Inhalation of high concentrations of Graphite dusts over prolonged periods of time may cause Pneumoconiosis. Symptoms can include cough, shortness of breath and decrease in pulmonary function. Preexisting pulmonary disorders such as Emphysema may possibly be aggravated by prolonged exposure to high concentrations of Graphite dust.

Inhalations of high concentrations of Crystalline Silica Dusts over prolonged periods of time may cause Silicosis, a progressively debilitating lung disease. The symptoms are similar to those cited above for Pneumoconiosis. Inhalation of high concentrations of Crystalline Silica over prolonged periods of time has also been linked to an increase incidence of lung cancer.

Additional toxicology information is available through the U.S National Institute for Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances (RTECS). See website:

<http://www.cdc.gov/niosh/ipcsneng/nengrtec.html>

SECTION 13 – Ecological Information

Steps to be taken in case material is spilled or released

Spilled or released material should be picked up with suitable implement and returned to the original container if reusable. If not reusable, the material should be placed in DOT approved containers for disposal. Personal involved in the cleanup should be wearing appropriate personal protective equipment. (See

Section 9). Carbon/graphite is relatively inert and would be expected to be of negligible consequences in the environment.

SECTION 14 – Disposal Considerations

Dispose in accordance with applicable waste disposal regulations. Do not allow material to enter storm or sanitary sewers, groundwater or soil. Releases may be reportable to local, state, or federal authorities. Disposal in an EPA approved landfill is recommended.

SECTION 15 – Transport information

This product is not regulated as a hazardous material for transportation purposes by any known authority.

SECTION 16 – Regulatory information

All materials in these product grades are listed on the US EPA Toxic Substances Control Act (TSCA) inventory.

SECTION 17 – Other Information

	HMIS Ratings
Health	1*
Flammability	1
Physical Hazard	0

*** indicates possible chronic health effects from continuing exposures**

Steps to be taken in case material is released or spilled:

1. Reasonable care has been taken in the preparation of information contained in this Safety Data Sheet and the information is provided in good faith. Bay Carbon, Inc. assumes no responsibility as to the accuracy of information drawn from other sources. No warranty, expressed, or implied, is made.

Information provided in this SDS has been prepared by competent and appropriately qualified and trained persons according to the US OSHA Hazard Communication Standard and Canada Controlled Regulation (WHMIS). It is the user's obligation to determine the conditions of safe use for this product.

2. Sheets, Rolls.
3. The Crystalline Silica component of this formation is listed as an animal carcinogen and a known human carcinogen by the International Agency for Research on Cancer (IARC).
4. Warning: The Crystalline Silica component of this formulation has been identified as a "chemical known to cause cancer" by the state of California.
5. The ingredients in this product are listed in:
 - * US - TSCA
 - * CANADA - DSL
 - * EU - EINECS
6. This product is WHMIS controlled D2A.
7. Personnel samples taken during cut – Part fabrication showed non-detectable levels of Crystalline Silica. There should be no Silica hazard to product users or fabricators as long as Graphite dust levels are below the limits cited in section 9.

This document was originally issued at revision 0. It has been revised as follows:

Date	Revision Details	Revision Level
10/15/2015	Update MSDS to SDS	1
10/15/2015	Update Content	2