Safety Data Sheet
according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: March 22, 2023

1 – Identification

Product identifier

· **Trade name: Expandable Flake Graphite**
· **CAS Number:** 12777-87-6

· **Recommended use:** Industrial uses, fire retarding agent
· **Restrictions on use:** Not intended for food and drug use.
·
Details of the supplier of the Safety Data Sheet
· **Manufacturer/Supplier:**
Asbury Carbons, Inc.
PO Box 144, 405 Old Main Street
Asbury, NJ 08802 USA
+1 908-537-2155
· **Emergency telephone number:**
ChemTel 800-255-3924 (North America)
+1 (813) 248-0585 (International)

2 - Hazards Identification

Classification of the substance or mixture

Carc. 1A	H350 May cause cancer. Route of exposure: Inhalation.
STOT RE 1	H372 Causes damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.
Combustible Dust	May form combustible dust concentrations in air.

Label Elements
GHS label elements
The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**

· **Signal word:** Danger

· **Hazard statements:**
H350 May cause cancer. Route of exposure: Inhalation.
H372 Causes damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.
May form combustible dust concentrations in air.

· **Precautionary statements:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash thoroughly after handling.

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P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
Prevent dust accumulations to minimize explosion hazard.
Keep away from all ignition sources including heat, sparks and flame.

· **Additional information:**
Read the label and safety data sheet before use.

Other hazards: May form explosible dust-air mixture if dispersed.

3 – Composition/Information on Ingredients

Chemical characterization: Substances

Description	CAS No.	Hazard Codes	Weight %
Sulphuric acid, compound with graphite	12777-87-6		> 99%
Quartz (SiO2)	14808-60-7	Carc. 1A, H350; STOT RE 1, H372	< 1 %

4 – First Aid Measures

Description of first aid measures

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Brush off loose particles from skin. If skin irritation is experienced, consult a doctor.
· **After eye contact:**
Remove contact lenses if worn. Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** Do not induce vomiting; immediately call for medical help.

·**Most important symptoms and effects, both acute and delayed:** No relevant information available.

·**Indication of any immediate medical attention and special treatment needed:**
If medical advice is needed, have product container or label at hand. If necessary oxygen respiration treatment.

5 – Fire Fighting Measures

Extinguishing media

· **Suitable extinguishing agents:** Use firefighting measures that suit the environment.
· **For safety reasons unsuitable extinguishing agents:** No relevant information available.
· **Special hazards arising from the substance or mixture**
Can pose a dust explosion hazard if dispersed in air. Avoid ignition sources. Dust Class ST1, MIE greater than 10J. During heating or in case of fire poisonous gases are produced.

Advice for firefighters

· **Protective equipment:**
Wear self-contained respiratory protective device. Wear fully protective suit.

6 – Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation. Avoid formation of dust. Particular danger of slipping on leaked/spilled product.

· **Environmental precautions** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up**
Sweep up and place into an appropriate container. Send for recovery or disposal in suitable receptacles.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 – Handling and Storage

· **Precautions for safe handling:**
Use only in well ventilated areas. Prevent formation of dust. Any deposit of dust which cannot be avoided must be regularly removed. Avoid breathing dust.

Information about protection against explosions and fires:
Dust can combine with air to form an explosive mixture.
Dust class ST1, MIE greater that 10 J (very low hazard of spark ignition)
·**Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and receptacles:**
Store in cool, dry conditions in well-sealed receptacles.
· **Information about storage in one common storage facility:**
Store away from foodstuffs. Store away from oxidizing agents.

8 – Exposure Controls/ Personal Protection

Control parameters
· **Components with limit values that require monitoring at the workplace:**

14808-60-7 Quartz (SiO2)
PEL (USA) Long-term value: Long-term value: 0.05* mg/m³ (*resp. dust; 30mg/m3/%SiO2+2)
REL (USA) Long-term value: 0.05* mg/m³ (*respirable dust; See Pocket Guide App. A)
TLV (USA) Long-term value: 0.025* mg/m³ (*as respirable fraction)
EL (Canada) Long-term value: 0.025 mg/m³ (ACGIH A2; IARC 1)
EV (Canada) Long-term value: 0.10* mg/m³ (*respirable fraction)
LMPE (Mexico) Long-term value: 0.025* mg/m³ (A2, *fracción respirable)

Exposure controls
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work.
· **Engineering controls:** Provide adequate ventilation.
· **Breathing equipment:** Respiratory protection required. Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded.
· **Protection of hands:** Protective gloves. The glove material has to be impermeable and resistant to the product.
· **Eye protection:** Tightly sealed goggles. Follow relevant national guidelines concerning the use of protective eyewear.
· **Body protection:** Not required.
· **Limitation and supervision of exposure into the environment:** No special requirements.
· **Risk management measures:** No special requirements.

9 – Physical and Chemical Properties

Information on basic physical and chemical properties
Appearance:
Form: Solid, granulate, powder

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Color: Grey to Black.
Odor: Odorless
Odor threshold: Not determined.

pH-value: Not applicable.
Melting point/Melting range: Not determined.
Boiling point/Boiling range: Not determined.

Flash point: The product is not flammable.
Flammability (solid, gaseous): Product is not flammable.
Auto-ignition temperature: Not determined.
Decomposition temperature: Not determined.
Danger of explosion: Can pose a dust explosion hazard if dispersed in air. Dust explosion class ST1: K_{ST} <200 bar m/s; Minimum Ignition Energy (MIE) greater than 10 joules.
Explosion limits
Lower: Not determined.
Upper: Not determined.
Oxidizing properties: Non-oxidizing.

Vapor pressure: Not determined.
Relative density: 2.26
Vapor density: Not applicable.
Evaporation rate: Not applicable.

Solubility in / Miscibility with Water: Not miscible or difficult to mix. Insoluble.
Partition coefficient (n-octanol/water): Not determined.
Viscosity
Dynamic: Not applicable.
Kinematic: Not applicable.

Other information: No relevant information available.

10 – Stability and Reactivity
Reactivity: No relevant information available.
Chemical stability: Stable under normal temperatures and pressures.
Thermal decomposition / conditions to be avoided:
To avoid thermal decomposition, do not overheat.
Avoid temperatures above 356 ºF / 180 ºC.
Toxic fumes may be released if heated above the decomposition point.
Possibility of hazardous reactions:
May form combustible dust concentrations in air. See section 9
Conditions to avoid: Excessive heat.
Incompatible materials: Oxidizers
Hazardous decomposition products: Carbon monoxide, carbon dioxide, sulfur oxides (SOx)

11 – Toxicological Information
Information on toxicological effects
Acute toxicity: Based on available data, the classification criteria are not met.
LD/LC50 values that are relevant for classification: None.
Primary irritant effect:
· **On the skin:** Based on available data, the classification criteria are not met.
· **On the eye:** Based on available data, the classification criteria are not met.
· **Sensitization:** Based on available data, the classification criteria are not met.

IARC (International Agency for Research on Cancer): CAS 14808-60-7 Quartz (SiO_2)

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NTP (National Toxicology Program): CAS 14808-60-7 Quartz (SiO2)
OSHA-Ca (Occupational Safety & Health Administration): None of the ingredients are listed.

Probable route(s) of exposure:
Ingestion, Inhalation, Eye contact, Skin contact

Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: May cause cancer. Route of exposure: Inhalation.
Reproductive toxicity: Based on available data, the classification criteria are not met.
STOT-single exposure: Based on available data, the classification criteria are not met.
STOT-repeated exposure: In situations of repeated excessive lung overload due to a high airborne concentration of particles of respirable size for extended periods of time, pneumoconiosis may develop. (Route of exposure: Inhalation)
Aspiration hazard: Based on available data, the classification criteria are not met.

12 – Ecological Information
Toxicity
Aquatic toxicity: No relevant information available.
Persistence and degradability: No relevant information available.
Bioaccumulative potential: No relevant information available.
Mobility in soil: No relevant information available.
Additional ecological information
· General notes: Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system
Other adverse effects: No relevant information available.

13 – Disposal Considerations
Waste treatment methods
Recommendation:
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Do not dispose in sewers or waterways

Uncleaned packagings
Recommendation: Disposal must be made according to official regulations.

14 – Transport Information
UN-Number
DOT, ADR/RID/ADN, IMDG, IATA: Not regulated.

UN proper shipping name
DOT, ADR/RID/ADN, IMDG, IATA: Not regulated.

Transport hazard class(es)
DOT, ADR/RID/ADN, IMDG, IATA: Not regulated.

Packing group
DOT, ADR/RID/ADN, IMDG, IATA: Not regulated.

Environmental hazards
Marine pollutant: No

Special precautions for user: Not applicable.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

15 – Regulatory Information
Safety, health and environmental regulations/legislation specific for the substance or mixture

United States (USA)

SARA Section 302 (extremely hazardous substances): None of the ingredients are listed.
SARA Section 313 (Specific toxic chemical listings): None of the ingredients are listed.
TSCA (Toxic Substances Control Act): All components have the value ACTIVE or EXEMPT.

Proposition 65 (California)
Chemicals known to cause cancer: CAS 14808-60-7 Quartz (SiO2)
Chemicals known to cause developmental toxicity for females: None of the ingredients are listed.
Chemicals known to cause developmental toxicity for males: None of the ingredients are listed.
Chemicals known to cause developmental toxicity: None of the ingredients are listed.

EPA (Environmental Protection Agency): None of the ingredients are listed.
IARC (International Agency for Research on Cancer): CAS 14808-60-7 Quartz (SiO2)
Canadian Domestic Substances List (DSL): All ingredients are listed or exempt.

16 – Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Abbreviations and acronyms:
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
OSHA: Occupational Safety & Health Administration
Carc. 1A: Carcinogenicity – Category 1A
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

Sources
Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services
(ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

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For other local and industry-specific regulatory declarations, please visit
https://asbury.com/resources/asbury-carbons-regulatory-statements/