

Material Safety Data Sheet



Poco Graphite Silicon Carbide Silicon Infiltrated

1. Product and company identification

Product name	: Poco Graphite Silicon Carbide Silicon Infiltrated
Material uses	: Not available.
Supplier/Manufacturer	: POCO Graphite, Inc. An Entegris Company 300 Old Greenwood Road Decatur, Texas 76234 800-433-5547, EXT-4202 (8am - 4pm CT, Mon - Fri)
MSDS authored by	: KMK Regulatory Services Inc.
In case of emergency	: Toll free: CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3887

2. Hazards identification

Emergency overview

Physical state	: Solid.
Color	: Grey to black.
Odor	: Odorless.
Signal word	: CAUTION!
Hazard statements	: MAY CAUSE EYE IRRITATION.
Precautionary measures	: Avoid contact with eyes. Wash thoroughly after handling.
OSHA/HCS status	: While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Potential acute health effects

Inhalation	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.
Skin	: No known significant effects or critical hazards.
Eyes	: Slightly irritating to the eyes.

Potential chronic health effects

Chronic effects	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation	: No specific data.
Ingestion	: No specific data.
Skin	: No specific data.
Eyes	: Adverse symptoms may include the following: irritation watering redness

Medical conditions aggravated by over-exposure : None known.

See toxicological information (Section 11)



3. Composition/information on ingredients

United States

Name	CAS number	%
Silicon carbide	409-21-2	80 - 90
Silicon	7440-21-3	10 - 20

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 20 minutes.
- Inhalation** : Move exposed person to fresh air.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
- Notes to physician** : No specific treatment. Treat symptomatically.

5. Fire-fighting measures

- Flammability of the product** : No specific fire or explosion hazard.
- Extinguishing media**
 - Suitable** : Use an extinguishing agent suitable for the surrounding fire.
 - Not suitable** : None known.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Not available.

6. Accidental release measures

- Personal precautions** : Provide adequate ventilation. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up**
 - Small spill** : Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
 - Large spill** : Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Empty containers retain product residue and can be hazardous.

7. Handling and storage

- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
Silicon carbide	<p>ACGIH TLV (United States, 2/2010). TWA: 0.1 f/cc 8 hour(s). Form: Fibrous TWA: 10 mg/m³ 8 hour(s). Form: Inhalable fraction. TWA: 3 mg/m³ 8 hour(s). Form: Respirable fraction</p> <p>NIOSH REL (United States, 6/2009). TWA: 5 mg/m³ 10 hour(s). Form: Respirable fraction</p> <p>OSHA PEL (United States, 6/2010). TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction TWA: 15 mg/m³ 8 hour(s). Form: Total dust</p>
Silicon	<p>OSHA PEL (United States, 6/2010). TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction TWA: 15 mg/m³ 8 hour(s). Form: Total dust</p> <p>NIOSH REL (United States, 6/2009). TWA: 10 mg/m³ 10 hour(s). Form: Total</p>

- Recommended monitoring procedures** : Personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : No special ventilation requirements. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Hygiene measures** : Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.
- Personal protection**
- Respiratory** : Not required under normal conditions of use. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Use gloves appropriate for work or task being performed. Recommended: Natural rubber (latex).
- Eyes** : Safety eyewear should be used when there is a likelihood of exposure. Recommended: Safety glasses with side shields.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Lab coat.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

9. Physical and chemical properties

- Physical state** : Solid.
- Color** : Grey to black.
- Odor** : Odorless.
- Molecular formula** : SiCSi
- Relative density** : 2 to 3.2
- Solubility** : Insoluble in the following materials: cold water and hot water.

10. Stability and reactivity

- Chemical stability** : The product is stable.
- Conditions to avoid** : No specific data.
- Incompatible materials** : Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

- Acute toxicity** : No specific data.

Product/ingredient name	Result	Species	Dose	Exposure
Silicon	LD50 Oral	Rat	3160 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Silicon	Eyes - Mild irritant	Rabbit	-	-	-

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Silicon carbide	A2	-	-	-	-	-

- IDLH** : Not available.

- Synergistic products** : Not available.

12. Ecological information

- Ecotoxicity** : No known significant effects or critical hazards.

13. Disposal considerations

- Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

International transport regulations

DOT / IMDG / IATA : Not regulated.

15. Regulatory information

HCS Classification : Not regulated.

U.S. Federal regulations : **TSCA 8(a) IUR Exempt/Partial exemption:** Not determined
United States inventory (TSCA 8b): All components are listed or exempted.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Silicon carbide; Silicon
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
 Silicon carbide: Immediate (acute) health hazard; Silicon: Fire hazard, Immediate (acute) health hazard

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : The following components are listed: Silicon carbide; Silicon

New York : None of the components are listed.

New Jersey : The following components are listed: Silicon carbide; Silicon

Pennsylvania : The following components are listed: Silicon carbide; Silicon

California Prop. 65

No products were found.

International regulations

International lists : **Australia inventory (AICS):** All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.

16. Other information

Label requirements : MAY CAUSE EYE IRRITATION.

Hazardous Material Information System (U.S.A.) : **Health :** 0 **Flammability :** 0 **Physical hazards :** 0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

16. Other information

National Fire Protection Association (U.S.A.) : **Health** : 0 **Flammability** : 0 **Instability** : 0

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Additional information : Refer to NFPA 654, *Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.*

History

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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.