

Material Safety Data Sheet



Poco Graphite Synthetic Graphite - Copper Impregnated EDM Grade EDM-C3, EDM-C200

1. Identification of the material and supplier

Names

- Product name** : Poco Graphite Synthetic Graphite - Copper Impregnated EDM Grade EDM-C3, EDM-C200
- Product type** : Solid block.
- ADG** : -

Supplier

- 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)
- Emergency telephone number** : CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3887

Uses

- Area of application** : Classification and labelling have been performed according to EU directives 67/548/EEC, 1999/45/EC, including amendments and the intended use.
- Material uses** : Electrical discharge machining electrodes, other industrial manufacturing components.

2. Hazards identification

- Classification** : N; R50/53
- Risk phrases** : R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- Safety phrases** : S61- Avoid release to the environment. Refer to special instructions/safety data sheet.
- Statement of hazardous/dangerous nature** : NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.
- Other hazards which do not result in classification** : May form combustible dust concentrations in air during processing activities (including; but not limited to: cutting, sanding, drilling, machining, dust control equipment, other dust generating activities). Users of this material should perform combustibility testing, prior to use, specific to their use conditions if dust is to be generated.

3. Composition/information on ingredients

- Mixture** : Yes.

Ingredient name	CAS number	Concentration
Graphite, synthetic	7440-44-0	40 - 60
Copper	7440-50-8	40 - 60

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

First-aid measures

- 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.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 20 minutes.
- Eye contact** : Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Advice to doctor** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Fine dust clouds may form explosive mixtures with air.
- Hazardous thermal 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.
- Special remarks on explosion hazards** : Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

6. Accidental release measures

- Personal precautions** : Minimize dust generation and accumulation. Keep unnecessary and unprotected personnel from entering. Provide adequate ventilation. Put on appropriate personal protective equipment. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Non-sparking tools should be used when working with dust.
- Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. See section 13 for waste disposal information.
- Methods for cleaning up**
 - Small spill** : Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose via a licensed waste disposal contractor.
 - Large spill** : If emergency personnel are unavailable vacuum or carefully scoop up spilled materials and place in an appropriate container for disposal. Avoid creating dusty conditions and prevent wind dispersal. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.





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7. Handling and storage

- Handling** : Provide adequate ventilation. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Non-sparking tools should be used when working with dust. Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Dust levels must be kept within prescribed limits. Spilled product should be cleaned up and a high standard of housekeeping maintained. Transfer product using proper grounding and bonding procedures to avoid static accumulation. See also Section 8 for additional information on hygiene measures.
- Storage** : Maintain graphite blocks in stable position. Any machined generated dust should be maintained in closed container. Maintain blocks as shipped, no specific handling or storage identified. Dust or powder from machining process should be kept in closed container.

8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Exposure limits
Graphite, synthetic	ACGIH (United States). TWA: 10 mg/m ³ 8 hours. Form: Nuisance particulates. Safe Work Australia (Australia, 8/2005). TWA: 1 mg/m ³ , (as Cu) 8 hours. Form: Dusts and Mists TWA: 0.2 mg/m ³ 8 hours. Form: Fume
Copper	

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, 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. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Exposure controls

- Engineering measures** : It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling dusts generated from this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Hygiene measures** : 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. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eyes** : Safety eyewear should be used when there is a likelihood of exposure. Recommended: Safety glasses with side shields.
- Hands** : Use gloves appropriate for work or task being performed. Recommended: Chemical-resistant gloves.
- Respiratory** : 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.
- Skin** : No special protective clothing is required.
- 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 block.
Colour	: Gray to black.
Odour	: Odourless.
Melting point	: Graphite: Sublimation temperature: 3648.9°C (6600°F). Copper: Melting point: 1083°C (1980°F)
Relative density	: 2.36
Solubility	: Insoluble in water.

10. Stability and reactivity

Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Minimize dust generation and accumulation.
Materials to avoid	: Reactive or incompatible with the following materials: oxidizing materials and acids.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Potential acute health effects

Inhalation	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.
Skin contact	: No known significant effects or critical hazards.
Eye contact	: No known significant effects or critical hazards.

Acute toxicity

There is no data available.

Potential chronic health effects

Chronic toxicity

There is no data available.

Irritation/Corrosion

Skin	: There is no data available.
Eyes	: There is no data available.
Respiratory	: There is no data available.

Sensitiser

Skin	: There is no data available.
Respiratory	: There is no data available.

Carcinogenicity

There is no data available.

Mutagenicity

There is no data available.

Teratogenicity

There is no data available.

Reproductive toxicity

There is no data available.

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.





11. Toxicological information

- 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 known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.
- Skin** : No known significant effects or critical hazards.
- Eyes** : No known significant effects or critical hazards.
- Target organs** : Contains material which may cause damage to the following organs: kidneys, liver, gastrointestinal tract, cardiovascular system, upper respiratory tract, skin, eyes.

12. Ecological information

- Ecotoxicity** : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Water polluting material. May be harmful to the environment if released in large quantities.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Copper	Acute EC50 1100 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute EC50 2.1 µg/l Fresh water	Daphnia - Daphnia longispina - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute IC50 13 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute IC50 5.4 mg/L Marine water	Aquatic plants - Plantae - Exponential growth phase	72 hours
	Acute LC50 0.072 µg/l Marine water	Crustaceans - Amphipoda - Adult	48 hours
	Acute LC50 7.56 µg/l Marine water	Fish - Periophthalmus waltoni - Adult	96 hours
	Chronic NOEC 2.5 µg/l Marine water	Algae - Nitzschia closterium - Exponential growth phase	72 hours
	Chronic NOEC 7 mg/L Fresh water	Aquatic plants - Ceratophyllum demersum	3 days
	Chronic NOEC 0.02 mg/L Fresh water	Crustaceans - Cambarus bartonii - Mature	21 days
	Chronic NOEC 2 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 0.8 µg/l Fresh water	Fish - Oreochromis niloticus - Juvenile (Fledgling, Hatchling, Weanling)	6 weeks

Other ecological information

Persistence/degradability

There is no data available.

Bioaccumulative potential

There is no data available.

- Other adverse effects** : No known significant effects or critical hazards.

13. Disposal considerations

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. 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 empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.





14. Transport information

International transport regulations

Regulation	UN number	Proper shipping name	Classes	PG*	Label	Additional information
ADG	Not regulated.	-	-	-		-
ADR	Not regulated.	-	-	-		-
IMDG	Not regulated.	-	-	-		-
IATA	Not regulated.	-	-	-		-

PG* : Packing group

Exemption to the above classification may apply.

15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons

Not regulated.

Control of Scheduled Carcinogenic Substances

Not available.

Australia inventory (AICS) : All components are listed or exempted.

16. Other information

Person who prepared the MSDS : KMK Regulatory Services Inc.

Date of issue : 15/01/2013

Version : 1

Revised Section(s) : Not applicable.

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.

