

## Safety Data Sheet

Material Name: Poco Graphite Synthetic Graphite - Copper Impregnated - EDM Grade

SDS ID: 0133 (JAPAN)

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Material Name**

Poco Graphite Synthetic Graphite - Copper Impregnated - EDM Grade

**Details of the supplier of the safety data sheet**

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**Product Description**

This SDS covers the following EDM Grades: EDM-C3, EDM-C200.

**Recommended Use**

EDM Machining

**Restrictions on Use**

None known.

**SECTION 2: Hazards identification****GHS Classification**

None needed according to classification criteria.

**GHS Label Elements****Symbol(s)**

None needed according to classification criteria.

**Signal word**

None needed according to classification criteria.

**Hazard statements**

None needed according to classification criteria.

**Precautionary statements****Prevention**

None needed according to classification criteria.

**Response**

None needed according to classification criteria.

**Storage**

None needed according to classification criteria.

**Disposal**

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None needed according to classification criteria.

**Potential Environmental Effects**

Very toxic to aquatic life with long lasting effects.

**Other Hazards Which Do Not Result in Classification**

When processed by milling, grinding, welding, melting, sawing, brazing, burning or other similar processes the generated dust, fines, fume or mist may pose a hazard through inhalation, ingestion or by eye or skin contact. May form combustible dust concentrations in air (during handling or processing). Small chips and dust generated by processes may be environmentally hazardous and toxic to aquatic life. SECTION 16: Other information.

**SECTION 3: Composition / information on ingredients**

CAS	Component Name	Percent	Japan ENCS Inventory #	Japan ISHL Inventory #
7782-42-5	Graphite	40-60	--	--
7440-50-8	Copper	40-60	--	--

**SECTION 4: First aid measures****Inhalation**

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

**Skin**

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

**Eyes**

Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Then get immediate medical attention.

**Ingestion**

If swallowed, get medical attention.

**Indication of any immediate medical attention and special treatment needed**

Treat symptomatically and supportively.

**Symptoms: Immediate**

respiratory tract irritation, allergic reactions, digestive tract damage

**Symptoms: Delayed**

allergic reactions

**Self-protection of the first aider**

Wear suitable protective equipment. Perform first aid measures in a safe area.

**SECTION 5: Firefighting measures****Suitable extinguishing media**

Use extinguishing agents appropriate for surrounding fire.

**Unsuitable Extinguishing Media**

None known.

**Specific hazards arising from the chemical**

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Negligible fire hazard. 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.

### **Fire Fighting Measures**

Move container from fire area if it can be done without risk. Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. Use extinguishing agents appropriate for surrounding fire. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Avoid inhalation of material or combustion by-products. Dike for later disposal.

### **Combustion**

oxides of carbon, oxides of copper

### **Special Protective Equipment and Precautions for Firefighters**

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

## **SECTION 6: Accidental release measures**

### **Personal precautions**

Wear personal protective clothing and equipment. Minimize dust generation and accumulation. Keep unnecessary people away, isolate hazard area and deny entry. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

### **Environmental precautions**

Avoid release to the environment. Collect spillage.

### **Methods and Materials for Containment and Cleaning Up**

Do not touch or walk through spilled material. Stop leak if possible without personal risk. Keep unnecessary people away, isolate hazard area and deny entry. If sweeping of a contaminated area is necessary, use a dust suppressant agent. Collect spill using a vacuum cleaner with a HEPA filter or wet and scoop up dry spills. Avoid sweeping spilled dry material. Eliminate ignition sources including sources of electrical, static or frictional sparks. Keep out of water supplies and sewers. Prevent entry into waterways, sewers, basements, or confined areas. Avoid accumulation of airborne dusts. Small spills: Move containers away from spill to a safe area. Vacuum or sweep up material and place in a designated, labeled waste container. Large spills: 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.

## **SECTION 7: Handling and storage**

### **Handling Procedures**

Do not breathe dust. Wash hands thoroughly after handling. Do not eat, drink, or smoke when using this product. Wear protective gloves. Contaminated work clothing must not be allowed out of the workplace. Use only outdoors or in a well-ventilated area. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions.

### **Storage Procedures**

None needed according to classification criteria

Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances. Maintain graphite blocks in stable position. Any machine 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.

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**Incompatibilities**  
acids, oxidizing materials

**SECTION 8: Exposure controls/personal protection**

**Component Exposure Limits**

<b>Graphite</b>	<b>7782-42-5</b>
JSOH:	2 mg/m3 OEL (Class 1 Dust ) total dust ; 0.5 mg/m3 OEL (Class 1 Dust ) respirable dust
ACGIH:	2 mg/m3 TWA (all forms except graphite fibers ) respirable particulate matter
<b>Copper</b>	<b>7440-50-8</b>
ACGIH:	0.2 mg/m3 TWA fume

**ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)**

There are no biological limit values for any of this product's components.

**Engineering controls**

Provide local exhaust or process enclosure ventilation system. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Ensure compliance with applicable exposure limits.

**Eye protection**

Wear safety glasses. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Body protection**

Wear appropriate chemical resistant clothing.

**Hand protection**

Wear appropriate chemical resistant gloves.

**Respiratory Protection**

SCBA with full face piece should be available in case of emergency.

**SECTION 9: Physical and chemical properties**

<b>Appearance</b>	gray to black solid block	<b>Physical State</b>	solid
<b>Odor</b>	odorless	<b>Color</b>	gray to black
<b>Odor Threshold</b>	Not available	<b>pH</b>	Not available
<b>Melting Point</b>	1083 °C (Copper )	<b>Boiling Point</b>	Not available
<b>Boiling Point Range</b>	Not available	<b>Freezing point</b>	Not available
<b>Evaporation Rate</b>	Not available	<b>Flammability (solid, gas)</b>	Not flammable.
<b>Autoignition Temperature</b>	Not available	<b>Flash Point</b>	(Not flammable )

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<b>Lower Explosive Limit</b>	Not available	<b>Decomposition temperature</b>	Not available
<b>Upper Explosive Limit</b>	Not available	<b>Vapor Pressure</b>	Not available
<b>Vapor Density (air=1)</b>	Not available	<b>Specific Gravity (water=1)</b>	Not available
<b>Water Solubility</b>	(Insoluble )	<b>Partition coefficient: n-octanol/water</b>	Not available
<b>Viscosity</b>	Not available	<b>Kinematic viscosity</b>	Not available
<b>Solubility (Other)</b>	Not available	<b>Density</b>	2.8 - 3.5 g/cc
<b>Physical Form</b>	solid block	<b>Sublimation</b>	3648.9 °C (graphite )
<b>Molecular Weight</b>	Not available		

**Other Property Information**

No additional information is available.

**SECTION 10: Stability and reactivity****Reactivity**

No reactivity hazard is expected.

**Stability**

Stable at normal temperatures and pressure.

**Possibility of hazardous reactions**

Will not polymerize.

**Conditions to avoid**

Avoid accumulation of airborne dusts. Avoid contact with incompatible materials.

**Incompatible materials**

acids, oxidizing materials

**Hazardous decomposition products****Thermal decomposition products**

oxides of carbon, oxides of copper

**SECTION 11: Toxicological information****Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and no selected endpoints have been identified.

**Acute Toxicity Estimate**

No data available.

**Immediate Effects**

respiratory tract irritation, allergic reactions, digestive tract damage

**Delayed Effects**

allergic reactions

**Skin Corrosivity/Irritation Data**

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No information on significant adverse effects.

**Serious Eye Damage/Eye Irritation**

No information on significant adverse effects.

**Respiratory Sensitization**

No data available.

**Dermal Sensitization**

Component data indicate the substance is sensitizing.

**Germ Cell Mutagenic Data**

No data available for the mixture.

**Component Carcinogenicity**

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA

**Reproductive Effects Data**

No data available for the mixture.

**Tumorigenic Data**

No data available for the mixture.

**Specific Target Organ Toxicity - Single Exposure**

respiratory system, digestive system

**Specific Target Organ Toxicity - Repeated Exposure**

No data available.

**Aspiration hazard**

No data available.

**Medical Conditions Aggravated by Exposure**

respiratory disorders, skin disorders and allergies

**SECTION 12: Ecological information**

**Ecotoxicity**

Very toxic to aquatic life with long lasting effects.

**Component Analysis - Aquatic Toxicity**

<b>Copper</b>	<b>7440-50-8</b>
Fish:	LC50 96 h Pimephales promelas 0.0068 - 0.0156 mg/L; LC50 96 h Pimephales promelas <0.3 mg/L [static ]; LC50 96 h Pimephales promelas 0.2 mg/L [flow-through ]; LC50 96 h Oncorhynchus mykiss 0.052 mg/L [flow-through ]; LC50 96 h Lepomis macrochirus 1.25 mg/L [static ]; LC50 96 h Cyprinus carpio 0.3 mg/L [semi-static ]; LC50 96 h Cyprinus carpio 0.8 mg/L [static ]; LC50 96 h Poecilia reticulata 0.112 mg/L [flow-through ]
Algae:	EC50 72 h Pseudokirchneriella subcapitata 0.0426 - 0.0535 mg/L [static ] EPA ; EC50 96 h Pseudokirchneriella subcapitata 0.031 - 0.054 mg/L [static ] EPA
Invertebrate:	EC50 48 h Daphnia magna 0.03 mg/L [Static ] EPA

**Persistence and degradability**

No data available for the mixture.

**Bioaccumulative potential**

No data available for the mixture.

**Mobility in soil**

No data available for the mixture.

**Other adverse effects**

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No data available.

<b>SECTION 13: Disposal considerations</b>
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**Waste residues**

Wastes should be treated and disposed by professionals certified by the governor of the local government, and hazards of the waste must be communicated sufficiently.

**Disposal of Contaminated Packaging**

Dispose in accordance with all applicable local regulations. When containers are empty, make sure all residues must be cleaned before disposal.

<b>SECTION 14: Transport information</b>
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**International Regulations**

**IATA Information:**

UN#: Not regulated

**ICAO Information:**

UN#: Not regulated

**IMDG Information:**

UN#: Not regulated

**International Bulk Chemical Code**

This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

**Domestic Regulations**

**Land transportation**

The product shall be packaged and shipped in accordance with Fire Service Act, Poisonous and/or Deleterious Substances Control Law.

**Water transportation**

The product shall be packaged and shipped in accordance with Ship Safety Act

**Air transportation**

The product shall be packaged and shipped in accordance with Civil Aeronautic Act.

<b>SECTION 15: Regulatory information</b>
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**Japan Regulations**

**Industrial Safety and Health Law**

The following substances are recognized as harmful according to the Enforcement Order of Industrial Safety and Health as administered by the Industrial Safety and Health Department in the Labor Standards Bureau of the ministry of Health, Labour and Welfare of Japan:

<b>Copper</b>	<b>7440-50-8</b>
Harmful Substances Whose Names are to be indicated on label:	>=1 % weight
SDS preparation is required:	>=0.1 % weight

**Japan Designated Chemical Substances (PRTR Law)**

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No components are subject to reporting requirements as specified by the "Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management" and are not included in the "Pollutant Release and Transfer Register (PRTR)" of designated chemicals.

**Poisonous and Deleterious Substances Control Law**

This product is classified in accordance with the Poisonous and Deleterious Substances Control Law. None of the components of this product are regulated as a poisonous or deleterious substance.

**Fire Service Law - Product**

Not applicable

**Civil Aeronautics Act**

Not regulated

**Ship Safety Act**

Not regulated

**Noxious Liquid Substances. - Cat. Y:**

**Act on Port Regulations**

Not regulated

**Japan Water Pollution Control Law**

<b>Copper</b>	<b>7440-50-8</b>
Designated substance	Cabinet Order Article 3-3 Number 53

**Component Analysis - Inventory**

**Graphite (7782-42-5)**

US	CA	EU	AU	PH	JP - ENC S	JP - ISH L	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EN	Yes	Yes	No	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes

**Copper (7440-50-8)**

US	CA	EU	AU	PH	JP - ENC S	JP - ISH L	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW	VN (Draft)
Yes	DSL	EN	Yes	Yes	No	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes

**SECTION 16: Other information**

**NFPA Ratings**

Health: 2 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe



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### Summary of Changes

11/1/2017 - Update to Section(s) 3, 8, 11. Section 3 update: Replaced CAS #7440-44-0 with CAS #7782-42-5.

### Preparation Date

05/13/2016

### Revision date

11/1/2017

### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania\*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL), KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX - Mexico; NDSL - Non-Domestic Substance List (Canada); NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL - Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH - Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN NCI (Draft) - Vietnam National Chemicals Inventory (NCI) (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada) .

### Other Information

#### Disclaimer:

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whether the product is fit for their particular purpose and suitable for their method of use or application. It is the user's responsibility to ensure that its activities comply with all applicable laws and regulations. Entegris is a registered trademark of Entegris Inc. or an affiliated company. © 2015 Entegris Inc. or affiliated company. All rights reserved.

When processed by milling, grinding, welding, melting, sawing, brazing, burning or other similar processes the generated dust, fines, fume or mist may pose a hazard through inhalation, ingestion or by eye or skin contact. Combustible Dust; Skin Sensitization Category 1; Specific Target Organ Toxicity - Single Exposure Category 1: digestive tract; Specific Target Organ Toxicity - Single Exposure Category 3: respiratory system; Hazardous to the Aquatic Environment - Acute Category 1; Hazardous to the Aquatic Environment - Chronic Category 1.