

Safety Data Sheet

Product No. Carbon and Graphite Products

Issue Date (09-24-15)

Review Date (08-31-17)

Section 1: Product and Company Identification

Product Name: Carbon and Graphite Products

Synonym: Carbon/Graphite

Chemical symbol: C

Company Name

Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477

Inside USA and Canada 1-800-237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

Outside USA and Canada 1-530-243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

CHEMTREC USA and Canada Emergency Contact Number 1-800-424-9300 24 hours a day

CHEMTREC Outside USA and Canada Emergency Contact Number +1-703-741-5970 24 hours a day

Section 2: Hazard Identification

2.1 Classification of the substance or mixture

Classification: The materials contained in this product are not classified as hazardous under Globally Harmonized System of Classification and Labeling and the US OSHA Hazard Communication Standard.

GHS Pictograms: NA

GHS Categories: NA

2.2 Label elements

Signal word, symbols, hazard and precautionary statements: Not applicable/void, due to non-hazardous classification.

2.3 Other hazards

Health Effects:

NFPA Hazard Rating: ND

HMIS® Hazard Rating: Health: 1; Fire: 1; Physical hazard: 0

(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Results of PBT and vPvB assessment: ND

Emergency overview:

Contains no ingredients now known to be hazardous by OSHA. The normal cutting of the fiber, rod or carbon mount, either with scissors, razor blade or other machining is suspected of generating small amounts of possibly respirable fibers or dust. We believe that such cutting or working with powder should be done in a ventilated hood facility.

Appearance: Black Greasy or gray if graphite

Immediate effects: Coughing, difficulty in breathing.

Potential health effects

Primary Routes of entry: Inhalation. Skin or eye contact.

Signs and Symptoms of Overexposure: Coughing, forceful expiration. Dyspnea,

difficulty in breathing. Black sputum, black colored expectorate. Bronchitis, inflamed bronchial mucous membranes, pulmonary fibrosis, fibrous tissue involving lungs.

Pneumoconiosis, degenerative respiratory disease.

Eyes: Dust may cause eye irritation.

Skin: Dust may cause skin irritation.

Skin Absorption: Not expected to be a major route of entry.

Ingestion: Not known.

Inhalation: Small graphite fibers, powders or dust are suspected as being possible inhalation hazards.

Chronic Exposure: A review of the literature does not show obvious long term hazard.

Chemical Listed As Carcinogen Or Potential Carcinogen: No component known to be present in this product and is at > 0.1% is presently listed as a carcinogen by IARC or OSHA unless otherwise noted.

See Toxicological Information (Section 11)

Potential environmental effects

See Ecological Information (Section 12)

Section 3: Composition / Information on Ingredients

Principle Component(s) (chemical and common name(s)) (Cas. No)	%	OSHA PEL mg/m ³	ACGIH TLV mg/m ³	NTP Carcinogen	IARC Carcinogen	OSHA regulated Carcinogen
Graphite (7782-42-5)	>99.99	15 (total) 5 (respirable)	2.0 (respirable)	No	No	No
Carbon (7440-44-0)	>99.99	15 (total) 8 (respirable)	10 (total) 3 (respirable)	No	No	No

Section 4: First Aid Measures

If accidental overexposure is suspected

Eye(s) Contact: In case of contact, immediately flush eyes with copious amounts of flowing water for at least 15 minutes, retracting eye lids often. Get medical attention immediately. Contact lenses should not be worn when working with this product.

Skin Contact: Wash skin thoroughly with mild soap and water. Flush with lukewarm water for 15 minutes.

Inhalation: If large amounts of the dust are inhaled, move the exposed person to fresh air at once. If symptoms persist contact physician.

Ingestion: Drink plenty of water. Contact physician/poison center if symptoms persist.

Section 5: Fire Fighting Measures

Flash Point: Product is not very combustible but may burn if exposed to high temperatures.

Flammable Limits: ND

Auto-ignition point: ND

Fire Extinguishing Media: Products is non-burning; use extinguisher suitable for the surrounding fire.

Special Fire Fighting Procedures: Use protective clothing and breathing equipment suitable for surrounding fire.

Unusual Fire and Explosion Hazards: Concentrated carbon/graphite dust can present an explosion hazard.

Practice good housekeeping to prevent dust accumulation and prevent situations where substantial amounts of dust can become airborne.

Hazardous combustion products: ND

DOT Class: Not regulated.

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Sweep or vacuum spilled material and place into sealable containers. Avoid creating and breathing airborne dust. Dispose in accordance with applicable waste disposal regulations.

Waste Disposal Methods: Dispose of waste according to Federal, State and Local Regulations.

Section 7: Handling and Storage

Precautions to be taken in Handling and Storage: Practice good housekeeping to avoid the accumulation of dust 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. Store in the plastic bags or container in which the product is shipped, tightly sealed.

Storage temperature: NA

Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection

Engineering Controls

Ventilation required: Chemical fume hood with exhaust.

Personal Protection Equipment

Respiratory protection: Use NIOSH-approved respiratory protective equipment (for example, an N-95 dust mask) if exposures exceed established limits.

Protective gloves: Latex gloves.

Skin protection: No special equipment required under normal conditions.

Eye protection: ANSI 87.1 approved safety glasses with side shield.

Additional clothing and/or equipment: None

Exposure Guidelines

See Composition/Information on Ingredients (Section 3)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Black fiber, rod, or powder with possibly "greasy" feel for carbon. Gray for graphite.

Odor (threshold): None (NA)

Specific Gravity (H₂O=1): 2 to 2.5 g/cc

Vapor Pressure (mm Hg): 0

Vapor Density (air=1): NIF

Percent Volatile by volume: NE

Evaporation Rate (butyl acetate=1): NE

Boiling Point: 4826.6° C

Melting point: 3651.6° C

pH: NA

Solubility in Water: Insoluble

Molecular Weight: 12.01

Section 10: Stability and Reactivity

Stability: Stable and non-reactive

Conditions to Avoid: Heat, sparks, flames, and other ignition sources; avoid heating above 290° C (554° F).

Materials to Avoid (Incompatibility): Strong oxidizers, fluorine, peroxides.

Hazardous Decomposition Products: NIF

Hazardous Polymerization: This material is not reactive.

Section 11: Toxicological Information

Results of component toxicity test performed:

Human experience: Graphite dust causes benign pneumoconiosis (graphitosis). Symptoms of pneumoconiosis from graphite exposure are Dyspnea, coughing, black sputum, bronchitis, ventricular hypertrophy and impairment of pulmonary function. X-rays will show progressive nodulation of the lungs.

Chronic Effects: A review of the literature does not show obvious long term hazard.

This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

Section 12: Ecological Information

Ecological Information: Product is relatively inert and consequences to the environment are expected to be negligible.

Chemical Fate Information: ND

Section 13 Disposal Considerations

RCRA 40 CFR 261 Classification: This product as purchased does not fall under current US EPA (Environmental Protection Agency) RCRA definitions of hazardous waste.

Under RCRA it is the generator's responsibility to determine the status of the waste at the time of its disposal.

Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information

US DOT Information: Proper shipping name: Not Regulated.

Hazard Class: Not Regulated.

Packaging group: NA

UN Number: Not Regulated.

Limitations: NA

IATA: Proper shipping name: Not Regulated.

Hazard Class: NA

Packing group: NA

UN Number: NA

Limitations: NA

Domestic shipments only:

IMO: Proper shipping name: NA

Class: NA

UN Number: NA

Packing group: NA

EMS: NA

MFAG: NA

Marine Pollutant: No

Canadian TDG: All components of this product are listed on the Canadian Environmental Protection Act (CEPA) provisional domestic substances list (DSL).

IMDG Page: NA

Limitations: NA

Section 15: Regulatory Information

United States Federal Regulations

SARA: Not listed anywhere

SARA Title III: No "313 chemicals" contained in this product.

RCRA: NIF

TSCA: All components of this product are listed on the Toxic Substance Control Act

(TSCA) Section 8(b) Chemical Inventory.

CERCLA: This product does not contain any CERCLA regulated materials.

State Regulations

California Proposition 65: None

International Regulations

Canada WHMIS: This product is not a "controlled product" as defined by the Canadian Workplace Hazardous Materials Information System (WHMIS).

Europe EINECS Numbers: NA

Section 16: Other Information

Label Information: See section 3

European Risk and Safety Phrases: NA

European symbols needed: NA

Canadian WHMIS Symbols: NA

Abbreviations used in this document

NE= Not established

NA= Not applicable

NIF= No Information Found

ND= No Data

Disclaimer

Ted Pella, Inc. makes no warranty of any kind regarding the information furnished herein. Users should independently determine the suitability and completeness of information from all sources. While this data is presented in good faith and believed to be accurate, it should be considered only as a supplement to other information gathered by the user. It is the User's responsibility to assure the proper use and disposal of these materials as well as the safety and health of all personnel who may work with or otherwise come in contact with these materials.