

Safety Data Sheet

Product No. 815-90 to 815-97 Boron Carbide Powder, 10, 14, 18, 23, 35, 42, 50, Micron (µm)

Issue Date (01-15-14)

Review Date (10-15-18)

Section 1: Product and Company Identification

Product Name: Boron Carbide Powder, 10, 14, 18, 23, 35, 42, 50, Micron (µm)

Synonym: Carbon tetraboride

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: This substance is not classified as a hazardous substance by OSHA or EU OEL standards.

GHS Pictograms: None

GHS Categories: None

2.2 Label elements

Hazard Pictograms: Void

Signal Word: None

Label Elements: (Dust / Inhalation)

Hazard Statement(s):

H335: May Cause Respiratory Irritation (Dust Inhalation)

Precautionary Statements:

P260: Do not breathe dust

P281: Use personal protective equipment as required

Precautionary Response:

P305: IF IN EYES: Rinse cautiously with water for 15 minutes.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P302+P350: IF ON SKIN: Wash gently with soap and water.

P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

2.3 Other hazards

IDLH (Immediate Danger to Life and Health): None

May cause respiratory irritation.

Do not breathe dust.

Use personal protective equipment as required.

Health Effects:

NFPA Hazard Rating: Health: 1; Fire: 0; Reactivity: 0

HMIS® Hazard Rating: Health: 1; Fire: 0; Reactivity: 0 Personal Protection E

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

Results of PBT and vPvB assessment:

PBT: ND

vPvB: ND

Emergency overview

Appearance: Grey to black powder or granular solid.

Immediate effects: May cause slight irritation to skin, eyes and respiratory tract.

Potential health effects

Signs and Symptoms of Overexposure: ND

Eyes: May cause temporary eye irritations. High concentrations may cause conjunctivitis; not corrosive.

Skin: Not expected to be a skin irritant. Prolong contact may cause redness and irritation.

Ingestion: No harmful effects expected in amounts likely to be ingested by accident.

Inhalation Spray mist or dry dust may cause congestion, coughing, granuloma in lungs.

Chronic Exposure: ND

Chemical Listed as Carcinogen or Potential Carcinogen: None

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/m3	ACGIH TLV mg/m3	NTP Carcinogen	IARC Carcinogen	OSHA regulated Carcinogen
Boron Carbide 12069-32-8 EC No.: 235-111-5	89.0- 100.0	15 General Dust	15 General Dust	No	No	No
Non-Hazardous Derivatives	0.0- 11.0	ND	ND	No	No	No

The terms “hazardous” and “hazardous materials” as used within this SDS (EU - MSD) should be interpreted as defined by, and accordance with, the OSHA Hazard Communication Standard (29 CFR 1910:1200) and the EU Occupational Exposure Limits (OEL) REGULATION (EC) No 1272/2008 including cited Appendices, Lists, References, etc., all of which are hereby incorporated by reference and stated below as appropriate.

OECD SIDS documents published by UNEP Chemicals in response to its mandate to facilitate the access to information needed for health and environmental risk assessment of chemicals. The documents contain the information gathered and an Initial Assessment performed under the framework of the OECD HPV Chemicals Programme.

Section 4: First Aid Measures**If accidental overexposure is suspected**

General: If medical advice is needed, have product container on hand.

Eye(s) Contact: Immediately rinse with water for a prolonged period while holding the eyelids wide open. Seek medical attention if material is embedded in the eye. If irritation persists, get medical advice/attention.

Skin Contact: Wash affected area with soap and water and isolate from exposure. If irritation or rash persists, seek medical advice/attention.

Inhalation: If symptoms of pulmonary involvement develop (coughing, wheezing, shortness of breath, etc.), remove from exposure and seek medical attention.

Ingestion: If swallowed, do not induce vomiting. Seek medical advice immediately and show the container or label.

Symptoms/injuries: Repeated or prolonged inhalation may damage lungs.

Symptoms/injuries after inhalation: May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of the throat.

Symptoms/injuries after skin contact: Prolonged contact with large amounts of dust may cause mechanical irritation. Dust may cause irritation in skin folds or by contact in combination with tight clothing.

Symptoms/injuries after eye contact: Redness, pain.

Symptoms/injuries after ingestion: Abdominal pain.

Chronic symptoms: Respiratory difficulties

Note to physician

Treatment: ND

Medical Conditions generally Aggravated by Exposure: ND

Section 5: Fire Fighting Measures

Flash Point: NA

Flammable Limits: NA

Auto-ignition point: NA

Fire Extinguishing Media: Product will not burn. For surrounding fires, an ABC-type fire extinguisher.

Special Fire Fighting Procedures: For a powder fire confined to a small area - use a respirator approved for dusts.

Unusual Fire and Explosion Hazards: None

Hazardous combustion products: None

DOT Class: None

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled:

Personal precautions, protective equipment: Do not breathe dust. Avoid generation of dust during clean-up of spills. Recover the product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up. Wear suitable protective clothing, gloves and eye/face protection. If airborne dust is generated, use the appropriate NIOSH-approved respiratory protection if PEL is exceeded. Environmental precautions: Prevent further leakage or spillage and comply with local, state and federal regulations. Methods/materials for containment and cleanup: Recover the dried product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up.

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:

Handling: If product has dried, do not breathe dust. Avoid creating or spreading dust. Handle in accordance with good industrial hygiene and safety procedures. Always wash your hands immediately after handling this product, and once again before leaving the workplace. Do not eat, drink or smoke in areas where product is used.

Storage: Store in a cool, dry place, Keep container tightly closed while being stored or not in use. No incompatible materials while in water.

Storage temperature: Room Temperature

Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection Engineering Controls

Ventilation required: Ventilation should effectively remove and prevent build-up of any vapor or mist generated from the handling of this product.

Personal Protection Equipment

Respiratory protection: Use an appropriate NIOSH approved respirator if airborne dust concentrations exceed the appropriate PEL or TLV.

Protective gloves: Protective gloves are recommended when contact with dust or mist is likely. Wash thoroughly prior to applying using protective gloves.

Skin protection: Full body protective clothing is advisable if contact with dust is expected. Work clothing should be changed daily if it is suspected that the clothing is contaminated.

Eye protection: Safety glasses with side shields or goggles are recommended.

Additional clothing and/or equipment: ND

Control Parameters

Boron Carbide Powder (BCP) – 12069-32-8

ACGIH TWA (mg/m³) Not Established

ACGIH STEL Not Established

ACGIH TLV 15.0 mg/m³ - General Dust

NIOSH REL (TWA) (mg/m³) 15.0 mg/m³ - General Dust

OSHA PEL (TWA) (mg/m³)

(Dried Product - Dust)

15.0 mg/m³ - General Dust

IDLH (mg/m³) 15.0 mg/m³ - General Dust

OECD SIDS UNEP TLV NA

BAuATRGs 900 NA

TLV: Threshold Limit Value of a chemical substance is a level to which it is believed a worker can be exposed day after

day for a working lifetime without adverse health effects.

TWA: (Time Weighted Average - TLV-TWA): average exposure on the basis of a 8h/day, 40h/week work schedule

STEL: (Short Term Exposure Level) is an employee's 15-minute time weighted average exposure at any time during a

work day and cannot be repeated more than 4 times in a day.

See Composition/Information on Ingredients (Section 3)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Grey to black powder or granular solid

Odor (threshold): Odorless (NA)

Specific Gravity (H₂O=1): 2.51

Vapor Pressure (mm Hg): NA

Vapor Density (air=1): NA

Percent Volatile by volume: NA

Evaporation Rate (butyl acetate=1): NA

Boiling Point: NA

Melting point: 2450° C

pH: NA

Solubility in Water: Insoluble

Molecular Weight: 55.25

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Avoid creating dust; dust clouds suspended in the air are can be explosive.

Materials to Avoid (Incompatibility): Strong acids, strong bases; oxidizers.

Hazardous Decomposition Products: Carbon oxides, Boron oxides.

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Acute Toxicity: Not Classified

Skin Corrosion / Irritant: Not Classified

Serious Eye Damage / Irritant: Not Classified

Respiratory / Skin Sensitisation: Not Classified

Germ Cell Mutagenicity: Not Classified

Carcinogenicity: Not Classified

Reproductive Toxicity: Not Classified

Target Organ Toxicity (Single Exposure): May cause respiratory irritation from dust.

Target Organ Toxicity (Repeated Exposure): If dust is present: causes damage to organs (lung / respiratory system) through prolonged or repeated exposure (inhalation)

Results of component toxicity test performed: ND

Human experience: ND

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: Not expected to be toxic to the environment; however, adopt controls to prevent the product from being released into the environment. Not readily biodegradable. Not expected to bioaccumulate.

Chemical Fate Information: ND

Section 13 Disposal Considerations

RCRA 40 CFR 261 Classification: None

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: Not regulated.

IATA: Not regulated.

IMO: Not regulated.

Marine Pollutant: No

Canadian TDG: Not regulated.

Section 15: Regulatory Information

United States Federal Regulations

SDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.

SARA: None listed. This product does not contain toxic chemical (s) subject to requirements of SARA Section 311 / 312 / 313 (40 CFR 372) for immediate (acute) health hazard and delayed (chronic) health hazard.

SARA Title III: No components subject to reporting are listed.

RCRA: None listed.

TSCA: All components of this product is listed on the TSCA inventory

CERCLA: No reportable quantity for this product.

Clean Water Act (CWA): None listed under sections of the Clean Water Act. Contact your local / state authorities to determine if substances are regulated under their jurisdiction.

Clean Air Act (CAA): None listed under sections of the Clean Water Act. Contact your local / state authorities to determine if substances are regulated under their jurisdiction.

State Regulations

California Proposition 65: No components are listed.

New Jersey Right to Know: Boron Carbide 12069-32-8

Massachusetts Right to Know: Boron Carbide 12069-32-8

Pennsylvania Right to Know: Boron Carbide 12069-32-8

International Regulations

EUROPEAN / INTERNATIONAL REGULATIONS: Control of Substances Hazardous to Health (COSHH): Component(s) are not listed under the sections of the COSHH regulation. Contact your local authorities to determine if substances are regulated under their jurisdiction.

Scottish Environmental Protection Agency (SEPA): Component(s) are not listed on SEPA. Contact your local authorities to determine if substances are regulated under their jurisdiction.

Canada: The components are not listed on the DSL (Domestic Substances List) inventory.

WHMIS Classification: Not Listed

Section 16: Other Information

European Risk and Safety Phrases:

S22 – Do not breathe dust.

S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36 – Wear suitable protective clothing.

European symbols needed: ND

Canadian WHMIS Symbols: ND

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.