SECTION 1 --- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME(S): Silicon Carbide, SiC-PS, SiC-75, SiC Brown (#2320), SiC Black, SiC-78B
OTHER PRODUCT NAMES: CF-150-SiC, CF-250-SiC, P910, P808, SIC-20, CBF-150, CBF-250, SiC-88, SiC-20, SiC Dust Collector Fines, Silicon Carbide 20TM, SiC-GR-30, S-80, SiC-320-F, SiC NEW CASTLE S, New Castle SiC, McKees Rocks SiC

CHEMICAL / ALLOY NAME: Silicon Carbide, SiC

MARKETING / SUPPLIER: BPI, Inc.
612 South Trenton Avenue
Pittsburgh, PA 15221
USA
Phone: 412-371-8554
Fax: 412-371-9984

HAZARDOUS MATERIAL INFORMATION SYSTEM (U.S.A.):

NATIONAL FIRE PROTECTION ASSOCIATION (U.S.A.):

Flammability
0 = MINIMAL
1 = SLIGHT
2 = MODERATE
3 = SERIOUS
4 = SEVERE

Reactivity
0 = MINIMAL
1 = SLIGHT
2 = MODERATE
3 = SERIOUS
4 = SEVERE

Personal Protection
E: Safety glasses + Gloves + Respirator

SECTION 2 --- COMPOSITION & EXPOSURE LIMITS

<table>
<thead>
<tr>
<th>CHEMICAL NAME (Molecular Formula)</th>
<th>CAS</th>
<th>Typical % Wt.</th>
<th>Respirable mg/m³</th>
<th>Total mg/m³</th>
<th>OSHA PEL TWA</th>
<th>ACGIH TLV TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Carbide</td>
<td>409-21-2</td>
<td>70-100</td>
<td>5 15 (as nuisance dust)</td>
<td>10 (as nuisance dust)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silicon Dioxide, Amorphous, Fused, (SiO2)*</td>
<td>60676-86-0</td>
<td>&lt;10</td>
<td>80mg/m³/ %SiO2</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon, (C), (“Free Carbon”)</td>
<td>1333-86-4</td>
<td>&lt;10</td>
<td>3.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alumina, (Al2O3)</td>
<td>1344-28-1</td>
<td>&lt;5</td>
<td>5 15</td>
<td>3 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron Oxide, Ferric Oxide, (Fe2O3)</td>
<td>1309-37-1</td>
<td>&lt;3</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silicon Dioxide, Crystalline, Quartz, (SiO2)</td>
<td>14808-60-7</td>
<td>&lt;1</td>
<td>10mg/m³/ (%SiO2+2)</td>
<td>30mg/m³/ (%SiO2+2)</td>
<td>0.05</td>
<td></td>
</tr>
</tbody>
</table>

May contain minor amounts of Organic Binders and/or Nitriles/ Silicon Nitride (Si3N4) (<3%) and less than 3% each Aluminum as Metal (Al), Boron (B)/ Boron Carbide (B4C), CaO, Silicon as Metal (Si), and Sulfur (S)

*These values are for particulate matter containing no asbestos and <1% crystalline silica

*OSHA PEL for Crystalline silica is calculated as:
(Respirable Dust)PEL = 10mg/M3 %quartz + 2(%cristobalite)+2(%trydimite)+2
(Total Dust)PEL=30mg/M3 %quartz+2(%cristobalite)+2(%trydimite)+2
SECTION 3 --- HEALTH HAZARD INFORMATION

INGESTION:
If ingested may cause gastrointestinal disturbances. Symptoms may include irritation, nausea, vomiting and diarrhea.

SKIN CONTACT:
Slightly irritating. Abrasive action may cause cuts and abrasions.

EYE CONTACT:
Slightly irritating. Abrasive action may cause damage to the outer surface of the eye.

INHALATION:
Dusts may cause respiratory tract irritation. Repeated or prolonged breathing of particles of respirable size may cause severe respiratory disease. Effects may include inflammation of the lung, chest pain, difficult breathing, coughing and possible fibrotic change in the lung --- “Pneumoniosis”. Pre-existing medical conditions may be aggravated by exposure; specifically, bronchial hyper-reactivity and chronic bronchial or lung disease.

SPECIAL TOXIC EFFECTS:
This product contains crystalline silica. IARC has determined that there is sufficient evidence for the carcinogenicity of crystalline silica to experimental animals and there is limited evidence for the carcinogenicity of crystalline silica to humans. This product contains amorphous silica. IARC has determined that there is inadequate evidence for the carcinogenicity of amorphous silica to experimental animals and humans.

SECTION 4 --- FIRST AID

INGESTION:
If victim is conscious, give 1-3 glasses of water or milk to dilute stomach contents. Get medical attention if irritation persists.

SKIN CONTACT:
Wash area of contact thoroughly with soap and water. Get medical attention if irritation persists.

EYE CONTACT:
Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.

INHALATION:
Remove affected person from source of exposure. Get medical attention if irritation persists.

SECTION 5 --- FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: None
FLAMMABILITY LIMITS IN AIR (% BY VOLUME): ND
LOWER EXPLOSIVE LIMIT (LEL): ND
UPPER EXPLOSIVE LIMIT (UEL): ND
EXTINGUISHING MEDIA: Use extinguishing agent suitable for type of surrounding fire.
SPECIAL FIRE FIGHTING PROCEDURE: None
UNUSUAL FIRE AND EXPLOSION HAZARDS: Dusts may form explosive mixture in air.

SECTION 6 --- ACCIDENTAL RELEASE MEASURES

No special procedures are required for clean-up of spills or leaks of this material. Avoid methods that result in water pollution. Caution should be exercised regarding personnel safety and exposure to the spilled material, as set forth in this data sheet.

SECTION 7 --- HANDLING AND STORAGE

HANDLING:
INFORMATION FOR SAFE HANDLING: Avoid contact with eyes, skin and mucous membranes. Avoid breathing dust during use. Ensure adequate ventilation / exhaust at the workplace. Prevent formation of dust. Provide suction extractors if dust is formed. Wash thoroughly.

STORAGE:
REQUIREMENTS TO BE MET BY STOREROOMS AND RECEPTACLES: Store in a cool, dry area.
INFORMATION ABOUT STORAGE IN ONE COMMON STORAGE FACILITY: Keep material dry.

SECTION 8 --- EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROL:
VENTILATION: Local exhaust ventilation may be necessary to control any air contaminants to within their regulatory limits during the use of this product.
RESPIRATORS: A NIOSH/MSHA approved respirator is required under certain circumstances where airborne concentrations are expected to exceed exposure limits.

GENERAL PROTECTIVE AND HYGIENIC MEASURES: Wash hands before breaks and at the end of work. Avoid contact with the eyes. Do not inhale dust.
PROTECTION OF HANDS: Wear appropriate gloves to avoid direct skin contact.
EYE PROTECTION: Safety glasses with full side shields or goggles when dust is generated.
SKIN PROTECTION: Cloth work gloves, long sleeve shirt, trousers.

SECTION 9 --- PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE / COLOR: Gray, Black, Brown, Tan and/or Green.
SIZE / FORM: Solid, Coarse, Fines, Granular and/or Powder.
SOLUBILITY IN WATER: SiC is Insoluble; Organic Binder are Soluble.
MELTING RANGE: ND
BOILING POINT: NA
SPECIFIC GRAVITY: ND
ODOR: None

SECTION 10 --- STABILITY & REACTIVITY

PRODUCT STABILITY: Stable under normal conditions of use.
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Soluble in hydrofluoric acid.
INCOMPATIBILITY (MATERIAL(S) TO AVOID): None
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Oxides of Silicon.

SECTION 11 --- TOXICOLOGICAL INFORMATION
This product contains crystalline silica. IARC has determined that there is sufficient evidence for the carcinogenicity of crystalline silica to experimental animals and there is limited evidence for the carcinogenicity of crystalline silica to humans. This product contains amorphous silica. IARC has determined that there is inadequate evidence for the carcinogenicity of amorphous silica to experimental animals and humans.

SECTION 12 --- ECOLOGICAL INFORMATION
GENERAL NOTES: No data found.

SECTION 13 --- DISPOSAL CONSIDERATIONS
This substance, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations; however it could be hazardous if it is considered toxic, corrosive, ignitable, or reactive according to Federal definitions (40 CFR 261).
Additionally, if could be designated as hazardous according to state regulations. This substance could also become a hazardous waste if it is mixed with or comes in contact with a hazardous waste. If such contact or mixing may have occurred, check 40 CFR 261 to determine whether it is a hazardous waste. If it is a hazardous waste, regulations at 40 CFR 262, 263, and 264 apply.
The transportation, storage, treatment, and disposal of this waste material must be conducted in compliance with all applicable Federal, state, and local regulations.

SECTION 14 --- TRANSPORTATION INFORMATION
This product is not a hazardous material as defined in 49 U.S. CFR PART 172. It is not defined as hazardous in the IATA regulations, Section 4.2 and also is not defined as dangerous goods in respect to carriage of dangerous goods by road and rail regulations 1996. Therefore, the material is not classified as hazardous for domestic or international shipping.

SECTION 15 --- REGULATORY INFORMATION
U.S. FEDERAL REGULATIONS:
TSCA (TOXIC SUBSTANCE CONTROL ACT):
Components of this product are listed on the TSCA inventory.

EINECS (EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES):
Components of this product are listed on the EINECS List.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):
SECTION 313 TOXIC CATEGORIES: None

INTERNATIONAL REGULATIONS:
CANADIAN DOMESTIC SUBSTANCES LIST: Components of this product are listed on the Canadian DSL.
AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES: Components of this product are listed on the AICS.
JAPAN MINISTRY OF INTERNATIONAL TRADE INDUSTRY (MITI): Components of this product are listed on MITI.

SECTION 16 --- OTHER INFORMATION
NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorization given or implied to practice any
patented invention without a license. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.

APPENDIX:

REFERENCES:

- Guide to Occupational Exposure Values 1997, Compiled by the American Conference of Governmental Industrial Hygienists (ACGIH).
- Documentation of the Threshold Limit Values and Biological Exposure Indices, Sixth Edition, 1991, Compiled by the American Conference of Governmental Industrial Hygienists, Inc. (ACGIH).
- OSHA Standard No. 29CFR1910.1000TABLE Z-1, Limits for Air Contaminants (website version reviewed September 23, 2002).

LEGEND:

- ACGIH American Conference of Governmental Industrial Hygienists
- CAS Chemical Abstract Services
- CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
- CFR Code of Federal Regulations
- DOT Department of Transportation
- DSL Domestic Substance List (Canada)
- ECOIN European Core Inventory
- EINECS European Inventory of Existing Commercial Chemical Substances
- EWC European Waste Catalogue
- EPA Environmental Protective Agency
- IARC International Agency for Research on Cancer
- LC Lethal Concentration
- LD Lethal Dose
- MAK Maximum Workplace Concentration (Germany)
- NDSL Non-Domestic Substance List (Canada)
- NIOSH National Institute for Occupational Safety and Health
- NTP National Toxicology Program
- OEL Occupational Exposure Limit
- OSHA Occupational Safety and Health Administration
- PIN Product Identification Number
- RCRA Resource Conservation and Recovery Act
- SARA Superfund Amendments and Reauthorization Act
- STEL Short Term Exposure Limit
- TCLP Toxic Chemicals Leachate Program
- TDG Transportation of Dangerous Goods
- TLV Threshold Limit Value
- TSCA Toxic Substances Control Act
- TWA Time Weighted Average

m = meter, cm = centimeter, mm = millimeter, in = inch, g = gram, kg = kilogram, lb = pound, ug = microgram, ppm = parts per million

ND = Not Determined
NA = Not Applicable