

**1. PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME:	Black Silicon Carbide –		
FORMULA:	SiC		
SUPPLIER:	C-E Minerals	MANUFACTURER:	C-E Minerals
ADDRESS:	901 E. Eighth Avenue	ADDRESS:	Route 2
	King of Prussia, PA 19406		Newell, WV 26050
PHONE:	(610) 265-6880	PHONE:	(304) 387-1160
EMERGENCY PHONE:	(304) 387-1160		
DESCRIPTION:	Black Silicon Carbide 97 typically contains 97% Silicon Carbide.		

**2. INGREDIENTS: COMPOSITION/INFORMATION**

INGREDIENT	% WEIGHT	PEL-OSHA	TLV-ACGIH	LD 50/LC 50 ROUTE/SPECIES
Silicon Carbide (non-fibrous) CAS No.: 409-21-2 RTECS No.: No Data	>90	10 mg/m <sup>3</sup> (total) 5 mg/m <sup>3</sup> (resp.) 10 mg/m <sup>3</sup> (total)	10 mg/m <sup>3</sup> * (inhalable) 3 mg/m <sup>3</sup> * (resp.)	No Data

\* The value is for inhalable (total) particulate matter containing no asbestos and <1% crystalline silica.

OSHA Regulatory Status: This material is classified hazardous under OSHA regulations.

**3. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**Non-combustible black solid or powder. Abrasive particulate may cause minor eye and skin irritation. Inhalation of high concentrations may cause transient upper respiratory irritation.**

**POTENTIAL HEALTH EFFECTS**

**EYE:** Particulate matter may scratch the cornea or cause other mechanical injury to the eye.

**SKIN:** May cause minor Irritation. Not absorbed through the skin.

**INGESTION:** Relatively non-toxic. Ingestion is not anticipated under normal working conditions.

**INHALATION:** Product will act as a nuisance dust. Inhalation of high concentrations of dust may cause coughing and mild, transitory respiratory irritation.

**SIGNS AND SYMPTOMS:** Scratching or physical damage to the eyes can cause irritation, redness, pain, tear formation, blurred vision, and light sensitivity.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Repeated inhalation of dusts over time may aggravate pre-existing respiratory disease.

**CHRONIC:** Long-term dust inhalation may decrease the ability of the lungs to clear particulate matter which may cause shortness of breath and increased susceptibility to respiratory disease.

**POTENTIAL HEALTH EFFECTS (continued)**

TARGET ORGAN: Lungs

CARCINOGENICITY: NTP: No IARC: No OSHA: No

**4. FIRST AID MEASURES**

**EYE:** Flush eyes with lukewarm water for 15 minutes opening and closing eyelids to ensure adequate rinsing. If redness, irritation, pain, or tearing occurs, seek medical attention.

**SKIN:** Wash area with soap and water. Wash contaminated clothing. Seek medical attention if symptoms occur.

**INHALATION:** Not expected. If inhalation of high concentrations occurs, remove to fresh air. A certified professional should administer oxygen or CPR if indicated. Seek immediate medical attention.

**INGESTION:** None required for small amounts. If large amounts are ingested, seek medical attention.

**5. FIRE FIGHTING MEASURES**

<b>FLAMMABLE PROPERTIES</b>		
FLASH POINT:	Not Applicable	
FLAMMABLE LIMITS:	LEL: Not Applicable	UEL: Not Applicable
<b>NFPA CLASSIFICATION:</b>		
HEALTH: 0	FLAMMABILITY: 0	INSTABILITY: 0

**EXTINGUISHING MEDIA:** Any. Use media appropriate for surrounding fire.

**FIRE AND EXPLOSION HAZARDS:** Non-flammable, non-combustible. Product will not burn.

**HAZARDOUS DECOMPOSITION PRODUCTS:** None

**FIRE FIGHTING INSTRUCTIONS:** Firefighters should wear a NIOSH approved full-facepiece self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout or bunker gear.

**6. ACCIDENTAL RELEASE MEASURES**

Isolate hazard area and deny entry to unauthorized and/or unprotected personnel. Vacuum small amounts. Gently shovel or scoop large amounts into clean dry container for later recycle or disposal. Water mist may be added as necessary to control the level of airborne dusts. Wear appropriate protective equipment (See Section 8).

**7. HANDLING AND STORAGE**

Store in dry area in closed containers. Storage and work areas should be periodically cleaned to minimize dust accumulation. Avoid dust inhalation and promulgation. DO NOT use compressed air or dry sweeping to remove dust from work area. Dusts should be removed using an appropriately equipped vacuum. If a vacuum is unavailable, only wet-clean-up methods should be used (i.e. wet sweeping, misting, etc.). Moisture should be added as necessary to reduce exposure to airborne respirable dust.

Under dusty conditions, employees should wear coveralls or other suitable work clothing. Vacuum grossly contaminated clothing before removal. Practice good housekeeping. Wash thoroughly after handling. Change contaminated clothing. Do not reuse until laundered.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**RESPIRATORY:** Under normal working conditions, below acceptable exposure guidelines, none is required. For concentrations to 10X above the PEL, a NIOSH/MSHA approved dust mist respirator should be worn. Appropriate respirator selection will be dependent upon the magnitude of exposure and must be selected in accordance with 29 CFR 1910.134.

**SKIN:** Protective gloves, as necessary to prevent irritation.

**EYES:** Safety-glasses with side shields or goggles to prevent dust and particles from entering the eye.

**ENGINEERING CONTROLS:** General ventilation. Local exhaust may be necessary for processes which generate large quantities of airborne dust.

**OTHER:** None

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>APPEARANCE:</b>	Black solid or powder.
<b>ODOR:</b>	Odorless
<b>SOLUBILITY IN WATER:</b>	Insoluble
<b>SPECIFIC GRAVITY (H<sub>2</sub>O = 1):</b>	3.21
<b>MELTING POINT:</b>	SiC does not melt but dissociates at -2300 C.
<b>pH (10% slurry):</b>	Not Applicable
<b>% VOLATILE</b>	0
<b>TYPES:</b>	Sizes range from coarse to powder

**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable under normal ambient conditions of temperature and pressure.

**REACTIVITY/INCOMPATIBILITY:** None known.

## 10. STABILITY AND REACTIVITY (continued)

DECOMPOSITION PRODUCTS: Not Applicable

HAZARDOUS POLYMERIZATION: Will not occur.

## 11. TOXICOLOGICAL INFORMATION

EYE: Particulate matter may cause physical injury to the eye.

SKIN: May cause minor skin irritation.

INHALATION: May cause minor transient respiratory irritation.

INGESTION: None known.

CHRONIC: Physiologic consequence of particulate overload of the respiratory tract involves altered macrophage function, sequestration of particles and increased lung burden. When large numbers of particles reach the interstitium, interstitial macrophage-fibroblast interactions are stimulated which in turn can stimulate fibrosis. Once overloaded, the macrophages can also become sequestrian compartments. As dust concentrations within the lung increase, the retention half-life for particulate matter also increases.

SUBCHRONIC: No Data

OTHER: None known

## 12. ECOLOGICAL INFORMATION

Black Silicon Carbide does not contain ozone depleting substances. It is not expected to exert an ecotoxic effect or bioconcentrate in the food chain.

## 13. DISPOSAL CONSIDERATIONS

Dispose of according to applicable federal, state, and local regulations. Dispose per 40 CFR 261 and 262.

## 14. TRANSPORT INFORMATION

U.S. Department of Transportation (DOT): Not Classified

## 15. REGULATORY INFORMATION

CANADIAN WHMIS: Not classified

EPCRA Section 302 (EHSs): This product does not contain ingredients subject to reporting requirements of 40 CFR Part 355, Appendices A and B (Extremely Hazardous Substances).

**15. REGULATORY INFORMATION (continued)**

CERCLA, Section 304: This product does not contain ingredients subject to state and local reporting under Section 304 of SARA Title III as listed in 40 CFR Part 302, Table 302.4

SARA 313 REPORTING REQUIREMENTS: This product does not contain ingredients subject to the reporting requirements of Section 313 SARA, and Section 6607 of the Pollution Prevention Act:

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and by definition, does not meet the requirements of any category.

**16. OTHER INFORMATION**

Revision Date: 5/4/99 C-E Minerals purchased former producer  
8/27/01 updated manufacturing facility location.  
8/15/03 Health and safety review and update

KEY:

ACGIH: American Conference of Governmental Industrial Hygienists  
CAS: Chemical Abstracts Service  
(C): Ceiling Limit  
DOT: Department of Transportation  
IARC: International Agency for Research on Cancer  
MSHA: Mine Safety and Health Administration  
NFPA: National Fire Protection Association  
NIOSH: National Institute for Occupational Safety and Health  
NTP: National Toxicology Program  
OSHA: Occupational Safety and Health Administration  
PEL: Permissible Exposure Limit  
SARA: Superfund Amendment and Reauthorization Act  
TLV: Threshold Limit Value

**DISCLAIMER**

Although reasonable care has been taken in the preparation of the information contained herein, C-E Minerals extends no warranties, makes no representation and assumes no responsibility as to the accuracy of suitability of such information for application to purchaser's intended purposes or for consequences of its use.