

MATERIAL SAFETY DATA SHEET

1. Chemical Product & Company Identification

Chemical Name	Product Name/Synonyms	Molecular Formula
Silicon Carbide	CARBOLON MA, EXO-SIL	SiC

Company Name: *Washington Mills Electro Minerals Corp.*
1801 Buffalo Avenue
Niagara Falls, NY 14302
Tel: (716) 278-6600 Fax: (716) 278-6650
Technical Information: (716) 278-6763

CHEMTREC (24HR Emergency Telephone) Call: 800-424-9300

HMIS

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
Personal Protection	E

2. Composition/Information on Ingredients

Chemical Name	CAS No.	EINECS	% by Weight	OSHA PEL (Exposure Guidelines)	
				Total (TWA)	Respirable (TWA)
Silicon Carbide	409-21-2	206-991-8	88.0 – 92.0	15 mg/m ³	5 mg/m ³
Carbon (Graphite)	7440-44-0	231-153-3	2.0 – 4.0		
Silicon	7440-21-3	231-130-8	0.5 – 1.0		
Silicon Dioxide ¹	14808-60-7	238-878-4	5.0 – 7.0	30 mg/m ³ % SiO ₂ + 2	10 mg/m ³ % SiO ₂ + 2

*This product contains crystalline silica.

¹ Crystalline Silica

3. Hazard Identification/Potential Health Effects

Emergency Overview: Dust irritating to eyes and respiratory tract. This product contains crystalline silica. Inhalation of free respirable crystalline silica may cause silicosis or other serious delayed lung injury. Crystalline silica is listed as a human carcinogen by IARC and NTP.

ROUTES OF ENTRY & SYMPTOMS

EYE	Mechanical eye irritant. May cause tearing and redness.
SKIN	Mechanical skin irritant. Prolonged contact may cause skin abrasion, redness, itching.
SENSITIZATION	No data available.
INGESTION	May cause nausea and vomiting. No long-term health effects are anticipated.
INHALATION	Dust may be slightly irritating to respiratory tract. May cause coughing or shortness of breath.
TARGET ORGANS	Eyes, skin, respiratory system.
ACUTE EFFECTS of EXPOSURE	Exposure may include persistent cough, shortness of breath.
CHRONIC EFFECTS of EXPOSURE	Inhalation of crystalline silica may cause silicosis or other serious delayed lung injury.
SIGNS & SYMPTOMS of EXPOSURE	Prolonged or repeated exposure may include persistent cough, shortness of breath, chest pain, increased amounts of sputum and changes in lung function tests.

4. First Aid Measures	
EYES	Flush eyes with large amounts of water. If signs/symptoms persist, seek medical attention.
SKIN	Wash affected area with soap and water. If signs/symptoms persist, seek medical attention.
INHALATION	Remove person to fresh air. If signs/symptoms develop, seek medical attention.
INGESTION	Ingestion is an unlikely route of exposure. Leave decision to induce vomiting to qualified medical personnel, since particles may be aspirated into the lungs. Seek immediate medical attention.

5. Fire Fighting Measures	
FLAMMABLE/COMBUSTIBLE PROPERTIES	None
EXTINGUISHING MEDIA	Extinguisher suitable for ordinary combustible materials. Class A extinguishing agents.
SPECIAL FIRE FIGHTING PROCEDURES	In fire conditions, fire-fighters should wear appropriate respiratory protection and full protective gear.
FIRE & EXPLOSION HAZARDS	Not applicable. None inherent in this product.

6. Accidental Release Measures	
PERSONAL SAFETY PRECAUTIONS	Avoid creating dust. Avoid contact with skin and eyes. Use with adequate ventilation.
ENVIRONMENTAL PRECAUTIONS	Ensure material is properly disposed of.
CLEANUP MEASURES	Collect spilled material mechanically and place in a suitable, compatible, properly labeled container. Avoid creating any dust. Ensure adequate ventilation and dispose of material in accordance with all applicable local, state and federal laws.

7. Handling & Storage	
HANDLING	Avoid contact with skin and eyes. Wash hands before eating. Prevent the formation of dust. Handle with adequate ventilation.
STORAGE	Normal Storage: Store in the original container in a cool, dry well ventilated area. Keep containers tightly sealed.

8. Exposure Controls & Personal Controls	
ENGINEERING CONTROLS	Provide sufficient mechanical ventilation to reduce airborne concentrations and minimize exposure. Maintain employee exposure below applicable permissible exposure limits.
HYGIENIC MEASURES	Do not inhale dust/smoke/mist. Avoid contact with skin and eyes. Wash hands before eating.
RESPIRATORY PROTECTION	Avoid breathing dust. Assess exposure concentrations of all materials involved in the workplace. If concentrations exceed the exposure limits listed in Section 2, Exposure Guidelines, or irritation or other symptoms are experienced, follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard 149 approved respirator.
EYE PROTECTION	Avoid eye contact. To minimize the risk of injury to eyes, always wear appropriate protective safety glasses or chemical safety goggles.
SKIN PROTECTION	Avoid skin contact. Wear appropriate protective clothing to minimize risk of injury to skin from contact with dust or physical abrasion.

9. Physical & Chemical Properties			
FORMULA	SiC	APPEARANCE	Grey
PHYSICAL STATE	Solid-granular	ODOR	Odorless
BOILING POINT	N/A	FLASH POINT	N/A
MELTING POINT	N/A	DECOMPOSITION TEMPERATURE	4892°F
pH at 20°	N/A	VAPOR PRESSURE	N/A
VAPOR DENSITY	N/A	OXIDIZING PROPERTIES	N/A
EXPLOSIVE PROPERTIES	None	SPECIFIC GRAVITY	3.2
SOLUBILITY	Insoluble	BULK DENSITY	N/A

10. Stability & Reactivity	
CHEMICAL STABILITY	Stable
THERMAL DECOMPOSITION	N/A
INCOMPATIBILITY	N/A
CONDITIONS TO AVOID	None known.
HAZARDOUS DECOMPOSITION PRODUCTS	Under recommended usage conditions, hazardous decomposition products are not expected. CO and CO ₂ decomposition products may occur as a result of combustion.
DANGEROUS REACTIONS	None known.
HAZARDOUS POLYMERIZATION	Will not occur.

11. Toxicological Information	
CAS # 409-21-2	
COMPONENT ANALYSIS LD50/LC50	Data Not Available
CARCINOGENICITY	This product contains crystalline silica. Inhalation of free respirable crystalline silica may cause silicosis or other serious delayed lung injury. Crystalline silica is listed as a human carcinogen by IARC and NTP.
EPIDEMIOLOGY	Data Not Available
TERATOGENICITY	
NEUROTOXICITY	
MUTAGENICITY	
REPRODUCTIVE EFFECTS	

12. Ecological Information	
ECOTOXICITY	Not Available

13. Disposal Considerations	
Solid or chemical waste generators must determine whether a discarded waste is classified as a hazardous waste. U.S. EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local waste regulations to ensure complete and accurate classification.	

14. Transportation Information	
U.S. DOT	This product is not regulated by USDOT as a Hazardous Material (49 CFR

	172.101). No UN code assigned. No placard required for transportation.
IMDG	Not regulated as a Hazardous Material.
ACAO/IATA	Not regulated as a Hazardous Material.
EU (ADR, RID)	Not regulated as a Hazardous Material.

15. Regulatory Information	
TSCA	Silicon Carbide is listed on the TSCA inventory under CAS# 409-21-2
RCRA	Silicon Carbide is not classified as a hazardous material under RCRA or its regulations, 40 CFR 261.
CERCLA	Silicon Carbide is not classified as a hazardous substance under CERCLA regulations, 40 CFR 302.
SARA	Silicon Carbide is not an extremely hazardous substance in Section 302 and is not a toxic chemical subject to the requirements of 313.

Prepared by Kevin J. Schroeder, Environmental, Health and Safety Manger

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