



SILICON CARBIDE

MATERIAL SAFETY DATA SHEET

Section I. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Product Name	Silicon Carbide
Synonyms	Crystolon Black / Green Silicon Carbide; Black / Green SiC
Formula	SiC (> 96%)
Distributor:	GritSablare
	Headquarter: 10 Eliza Zamfirescu Leonida Street, Bucharest
	Storage & Logistic: Constanța Seaport, Gate 2, SORENA Platform, Constanța, Romania
	Phone: (+4) 0722.279.481
	Email: comercialgritsablare@gmail.com
	Website: www.gritsablare.ro

Section II. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS#	Weight (%)	PEL-OSHA mg/m ³	TLV-ACGIH mg/m ³	Carcinogen Y/N
Silicon Carbide (SiC)	409-21-2	97.99	15	10	No
Free Silicon Dioxide (SiO ₂)	7631-86-9	0.5	10	10	No
Free Silicon (Si)	7440-21-3	0.6	15	10	No
Free Carbon (C)	133-86-4	0.3	3.5	3.5	No

** Respirable Fraction: 5mg/m³

* Materials are regulated under OSHA 29 CFR 1900.1200, Hazard Communication Standard.

* Source of exposure limit data; ACGIH Threshold Limit Values; (OSHA Tables Z-1-A, Z-2, Z-3)

* All ingredients are listed under TSCA.

Section III. HAZARDS IDENTIFICATION

Emergency Overview:

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

Primary Route(s) of Entry:

Inhalation:	Yes
Skin:	No
Ingestion:	No
Other:	No potential health effects

Acute:

Eye:	Dusts may cause minor irritation. Particulate matter may scratch the cornea or cause other mechanical injury to the eye.
Skin:	May cause minor irritation. Not absorbed through 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. May caused slight to moderate irritation of mucous membranes.

Chronic:

Inhalation:	Long-term dust inhalation in excess of the PEL or TLV may decrease the ability of the lungs to clear particulate matter which may cause shortness of breath and increased susceptibility to respiratory disease.
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Signs and Symptoms:	Irritation, redness, pain, tear formation, blurred vision, light sensitivity, shortness of breath, decreased chest expansion, dry cough, and fatigue.
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Medical Conditions Aggravated by Exposure:	Repeated inhalation of dusts over time may aggravate pre-existing respiratory disease. Precautions should be taken to alleviate the pre-existing medical condition.
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Target Organs:	Lungs
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Carcinogenicity:

NTP:	No
IARC:	No
OSHA:	No

Section IV. FIRST AID MEASURES

Eyes:	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 contaminated area with soap and water. Wash contaminated clothing. Seek medical attention if symptoms persist.
Inhalation:	If inhalation of high concentrations occurs, move to fresh air. If breathing has stopped, a certified professional should give CPR. Seek immediate medical attention.
Ingestion:	Do not induce vomiting unless suggested by a doctor. Seek medical attention.

Section V. FIREFIGHTING MEASURES

Flash Point:	Not applicable
Flammable Limits:	LEL: not applicable UEL: not applicable
Auto Ignition Temperatures:	Not applicable
Extinguishing Media:	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/MSHA approved full-faced self-contained breathing apparatus (SCBA) operated in positive pressure mode, and full turnout or bunker gear.
NFPA Classification:	Health: 1 / Flammability: 0 / Reactivity: 0

Section VI. ACCIDENTAL RELEASE MEASURES

Isolate hazard area and deny entry to unauthorized and/or unprotected personnel. Avoid dust generation. Water mist may be added as necessary to control the level of airborne dusts. Respiratory protection for clean-up personnel depends on the level of exposure anticipated. (See Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION) Gently shovel or scoop into clean dry container for later recycle or disposal. Comply with Federal, State and Local regulations regarding reporting of spills and disposal.

Section VII. 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. Exhaust air should be filtered through a HEPA (high-efficiency particulate air) filter. If an appropriate 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. See OSHA 29 CFR 1910.94 (Ventilation) and 29 CFR 1910.1000 (Air Contaminants).

Section VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection:	Under normal working conditions, below acceptable exposure guidelines, none is required. For concentrations above the PEL but less than 10X the PEL, a NIOSH/MSHA approved dust mist respirator should be worn. Appropriate respirator selection will be dependent upon the magnitude of exposure and should be selected in accordance with 29 CFR 1910.134. (See Section 2. COMPOSITION for PEL's and TWA's).
Skin Protection:	Protective gloves, as needed, to prevent skin contact
Eye protection:	Safety-glasses with side shields or goggles to prevent dust and particles from entering the eye. See OSHA 29 CFR 1910.133.
Other:	Under dusty conditions, employees should wear coveralls or other suitable work clothing. Contaminated clothing must be vacuumed before removal. DO NOT REMOVE dust from clothing by blowing or shaking.
Engineering Controls:	Use general ventilation. Local exhaust may be necessary for processes which generate large quantities of airborne dust. Keep exposures below applicable OSHA PEL's and ACGIH-TLV's.

Section IX. PHYSICAL AND CHEMICAL PROPERTIES

Formula:	SiC
Molecular Weight:	40.07
Boiling Point:	Not Applicable
Melting Point:	SiC does not melt but dissociates at ~2300°C
Specific Gravity:	(H2O = 1) 3.21
Percent Volatile:	0
Evaporation Rate:	None
Solubility in Water:	Insoluble
Solubility in Alcohol:	Insoluble
PH (10% slurry):	Not applicable
Appearance / Odor:	Black solid or powder / odourless

Section X. STABILITY AND REACTIVITY

Stability:	Stable under normal ambient conditions of temperature and pressure.
Reactivity / Incompatibility:	No incompatible materials known.
Hazardous Decomposition:	Not applicable.
Hazardous Polymerization:	Will not occur.

Section XI. TOXICOLOGICAL INFORMATION

Eye:	Dust may irritate eyes Inhalation.
Skin:	May cause minor irritation by chemical action (abrasive).
Inhalation:	May cause respiratory tract irritation with coughing, and shortness of breath.
Ingestion:	No known adverse effects, but ingestion is not recommended.
Chronic: Potential Health Effects:	
Inhalation:	May affect breathing capacity.

Section XII. ECOLOGICAL INFORMATION

Black silicon carbide is not expected to exert an ecotoxicity effect or bioconcentrate in the food chain.

Section XIII. DISPOSAL CONSIDERATIONS

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

Section XIV. TRANSPORT INFORMATION

U.S. Department of Transportation (DOT):	Not Classified
Identification:	Not applicable
Special Provisions for Transport:	Not applicable.

Section XV. REGULATORY INFORMATION

Federal and State Regulations:

Illinois toxic substances disclosure to employee act:	Boiling chips
Rhode Island RTK hazardous substances:	Boiling chips
Pennsylvania RTK:	Boiling chips
Minnesota:	Boiling chips
Massachusetts RTK:	Boiling chips
New Jersey:	Boiling chips
TSCA 8(b) inventory:	Boiling chips

Other Regulations:

EINECS:

This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):

Not controlled under WHMIS (Canada).

DSCL (EEC):

R36/38 - Irritating to eyes and skin.
S2 - Keep out of the reach of children.
S46 - If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.):

Health Hazard: 2
Fire Hazard: 1
Reactivity: 0
Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2
Flammability: 1
Reactivity: 0

Specific hazard:

Protective Equipment: Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

Section XVI. KEY

- ACGIH American Conference of Governmental Industrial Hygienists
- CAS Chemical Abstracts Service
- 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
- TSCA Toxic Substance Control Act

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