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SAFETY DATA SHEET

Section 1- IDENTIFICATION

COMPOSITION SiC		PRODUCT NAME Silicon Carbide
SUPPLIER: Plasmaterials, Inc. 2268 Research Drive Livermore, CA 94550 Ph: 925-447-4030	RECOMMENDED USE: Laboratory Chemicals Scientific Research	EMERGENCY TELEPHONE NUMBERS US: 001-800-424-9300 Europe: 001-703-527-3887

Section 2- HAZARD(S) IDENTIFICATION

Physical Hazards: Not Classified	Health Hazards: Carcinogenicity - Category 1 (H350)
Environmental Hazards: Not Classified	OSHA Defined Hazards: Not Classified
LABEL ELEMENTS: Signal Word: Danger	
	
HAZARD STATEMENTS	
-H350: May cause cancer	
PRECAUTIONARY STATEMENTS	
-P201: Obtain special instructions before use	
-P202: Do not handle until all safety precautions have been read and understood	
-P280: Wear protective gloves, protective clothing, eye protection and face protection	
-P308+P313: If exposed or concerned: Get medical advice/attention	
-P405: Store locked up	
-P501: Dispose of contents/container to an approved waste disposal plant	
Hazards not otherwise classified (HNOC):	
-None identified.	

Section 3- COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS-No	Molecular Weight
Silicon Carbide	409-21-2	40.07 g/mol

Section 4- FIRST AID MEASURES

<p>GENERAL ADVICE: If exposed or concerned, get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.</p> <p>Inhalation: Remove victim from exposure to fresh air. Give oxygen if breathing is difficult. If not breathing, give artificial respiration. Consult a physician if symptoms develop or persist.</p> <p>Skin Contact: Wash off with soap and plenty of water. Wash contaminated clothing before reuse. If skin irritation develops or persists, get medical advice/attention.</p>
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Eye Contact: Flush eyes with plenty of water, lifting upper and lower lids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation develops or persists, get medical advice/attention.

Ingestion: Rinse mouth with water. Never give anything by mouth to an unconscious person. If symptoms occur, get medical advice/attention.

Most Important Symptoms/Effects: The most important known symptoms and effects are described in the labeling (see section 2) and/or in section 11. Coughing.

Indication of any Immediate Medical Attention and Special Treatment Needed: Provide general supportive measures and treat symptomatically. Keep victim under observation as symptoms may be delayed.

Section 5- FIREFIGHTING MEASURES

Suitable Extinguishing Media:

Not available

Unsuitable Extinguishing Media:

Water

Specific Hazards Arising from the Chemical:

Water reactive material

General Fire Hazards:

No unusual fire or explosive hazards noted

Protective Equipment & Precautions for Firefighters:

As in any fire, Firefighters must wear full face, self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective clothing to prevent contact with skin and eyes.

Specific Methods: Use standard firefighting procedures and consider the hazards of other involved materials. Do not get water inside container.

Section 6- ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Keep unnecessary personnel away. Keep people away from upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personnel protection see Section 8.

Environmental Precautions:

Avoid discharge into drains, water courses or onto the ground.

Methods for Containment & Clean Up:

Do not get water on spilled substance or inside containers. The product is immiscible with water and will spread on the water surface. Stop the flow of material if this is without risk. Cover with Dry Earth, Dry Sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain. Put material in suitable, covered, labeled containers.

For waste disposal see Section 13.

Section 7- HANDLING AND STORAGE

Handling:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not allow water to get into container because of violent reaction and possible flash fire. Avoid prolonged exposure. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Storage:

Store locked up. Never allow product to get in contact with water during storage. Store in original tightly closed container. Keep container dry. Store in a building without sprinklers. Store away from incompatible materials.

Section 8- EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Occupational Exposure Limits/Components with Workplace Control Parameters: The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Component	CAS-No.	Basis	Value	Control Parameters	Form
Silicon Carbide	409-21-2	USA.NIOSH Pocket Guide to Chemical Hazards Material	TWA	5 mg/m ³	Respirable
				10 mg/m ³	Total
		USA.Occupational Exposure Limits (OSHA) Table Z-1 Limits for Air Contaminants (29 CFR 11910.1000)	PEL	5 mg/m ³	Respirable fraction
				15 mg/m ³	Total Dust
		USA. ACGIH Threshold Limit Values (TLV)	TWA	0.1 fibers/cm ³	Fiber
				3 mg/m ³	Respirable fraction
				10 mg/m ³	Inhalable fraction
		USA.Occupational Exposure Limits (OSHA) Table Z-3 (29 CFR 11910.1000)	TWA	5 mg/m ³	Respirable fraction
				15 mg/m ³	Total dust
				50 mppcf	Total dust
				15 mppcf	Respirable fraction
		USA. California Code Regulations, Title 8, Section 5155. Airborne Contaminants Material	PEL	5 mg/m ³	Respirable fraction
				10 mg/m ³	Total dust

Biological Limit Values: No biological exposure limits noted for the substance

Appropriate Engineering Controls:

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment:

Eye/Face Protection: Wear safety glasses with side shields or goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and Body Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Wear appropriate chemical resistant protective clothing. Use of an impervious apron is recommended. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Thermal Hazards: Wear appropriate thermal protective clothing when necessary.

Hygiene Measures: Observe any medical surveillance requirements. Handle in accordance with good industrial hygiene and safety practice. When using do not smoke. Keep away from food and drink. Wash thoroughly after handling and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the

workplace.

Section 9- PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid
Odor: No information available
Odor Threshold: No information available
pH: No information available
Melting Point/Range: 2600°C (4712°F)
Boiling Point/Range: No data available
Flash Point: No information available
Evaporation Rate: No information available
Flammability (solid,gas): No information available
Flammability or Explosive Limits:
 Upper: No data available
 Lower: No data available
Vapor Pressure: No information available
Vapor Density: No information available
Relative Density: No information available
Solubility: Insoluble
Partition coefficient; n-octanol/water: No information available
Auto Ignition Temperature: No information available
Decomposition Temperature: No information available
Viscosity: No information available
Explosive Properties: No information available
Oxidizing Properties: No information available
Density: 3.23 g/cm³ estimated
Specific Gravity: 3.23

Section 10- STABILITY AND REACTIVITY

Reactive Hazard: Stable and non-reactive under normal conditions of use, storage and transport
Stability: Material reacts with water
Conditions to Avoid: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Exposure to water vapor. Contact with incompatible materials
Incompatible Materials: Water, Moisture
Hazardous Decomposition Products: No information available
Hazardous Polymerization: No information available
Hazardous Reactions: No information available

Section 11- TOXICOLOGICAL INFORMATION

Information on likely Routes of Exposure:
 Inhalation: Prolonged inhalation may be harmful
 Skin Contact: No adverse effects due to skin contact are expected
 Eye Contact: Direct contact with eyes may cause temporary irritation
 Ingestion: Expected to be a low ingestion hazard
Symptoms related to the physical, chemical and toxicological characteristics: Coughing
Information on Toxicological Effects:
 Acute Toxicity: No information available
 Skin Corrosion/Irritation: Prolonged skin contact may cause temporary irritation
 Serious eye damage/irritation: Direct contact with eyes may cause temporary irritation
 Respiratory or Skin Sensitization: No information available
 Carcinogenicity: May cause cancer
 IARC Monographs Overall Evaluation of Carcinogenicity: Silicon Carbide (CAS:409-21-2) – 2A Probably carcinogenic to humans

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052): Not regulated

US National Toxicology Program (NTP) Report on Carcinogens: Not listed

Germ Cell Mutagenicity: No information available

Reproductive Effects: No information available

Development Effects: No information available

Specific Target Organ Toxicity – single exposure: No information available

Specific Target Organ Toxicity – repeated exposure: No information available

Aspiration Hazard: No information available

Chronic Effects: Prolonged inhalation may be harmful

-To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Section 12- ECOLOGICAL INFORMATION

Toxicity: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and Degradability: No information available

Bioaccumulation/Accumulation: No information available

Mobility in Soil: No information available

Results of PBT & vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Other Adverse Effects: No information available.

Section 13- DISPOSAL CONSIDERATIONS

Waste Disposal Methods: Collect and reclaim or dispose in sealed containers to a licensed disposal company. Dispose of contaminated packaging as unused product. Do not allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14- TRANSPORT INFORMATION

DOT: Not regulated as dangerous goods

IATA: Not regulated as dangerous goods

IMDG/IMO: Not regulated as dangerous goods

Section 15- REGULATORY INFORMATION

US Federal Regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt.D): Not regulated

U.S. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052): Not Listed

SARA 302 Extremely Hazardous Substance: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

SARA 304 Emergency Release Notification: Not regulated

SARA 313 (TRI Reporting): This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313

SARA 311/312 Hazardous Chemical: Yes

CERCLA Hazardous Substance List (40 CFR 302.4): Not Listed

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not regulated

Safe Drinking Water Act (SDWA): Not regulated

US California Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm.

US California Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3 subd. (a)): Silicon Carbide (CAS-No: 409-21-2)

Section 16- OTHER INFORMATION

The above information is accurate to the best of our knowledge. However, since data, safety standards and government regulations are subject to change, the conditions of handling and use, or misuse are beyond our control, Plasmaterials, Inc. makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Users should satisfy themselves that they have all current data relevant to their particular use.

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