

SECTION 1. IDENTIFICATION

GHS product identifier	Silicon Carbide
Other means of identification	Reaction Bonded Silicon Carbide
Relevant identified uses of the substance or mixture and uses advertised against	Solid

RECOMMENDED USE AND RESTRICTIONS

Supplier's details	Heeger Materials Inc. 230 Steele St Denver CO 80206, United States Phone: +1 925 385 8104 www.heegermaterials.com
Emergency telephone number (with hours of operation)	+1 303 271 7100 7:00 AM - 4:00 PM MST

SECTION 2. HAZARDS IDENTIFICATION

OSHA/HCS status	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Classification of the mixture	Not classified
GHS LABEL ELEMENTS	
Signal word	No signal word
Hazard Statements	No known significant effects or critical hazards
PRECAUTIONARY STATEMENTS	
Prevention	Not applicable
Response	Not applicable
Storage	Not applicable
Disposal	Not applicable
Hazards not otherwise classified	None known

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture	Mixture
Other means of identification	Reaction Bonded Silicon Carbide
CAS NUMBER /OTHER IDENTIFIERS	
CAS Number	Not Applicable
Product code	Not Applicable

INGREDIENT NAME	%	CAS NUMBER
Silicon Carbide	75 - 90	409-21-2
Silicon	10 - 30	7440-21-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4. FIRST AID MEASURES

DESCRIPTION OF NECESSARY FIRST AID MEASURES

Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	Flush contaminated skin with plenty of water. Get medical attention if symptoms occur.
Ingestion	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED Potential acute health effects

Eye contact	No known significant effects or critical hazards
Inhalation	No known significant effects or critical hazards
Skin contact	No known significant effects or critical hazards
Ingestion	No known significant effects or critical hazards

SECTION 4. FIRST AID MEASURES, CONTINUED

OVER-EXPOSURE SIGNS/SYMPTOMS

Eye contact	No known significant effects or critical hazards
Inhalation	No known significant effects or critical hazards
Skin contact	No known significant effects or critical hazards
Ingestion	No known significant effects or critical hazards

INDICATION OF IMMEDIATE MEDICAL
ATTENTION AND SPECIAL TREATMENT

NEEDED, IF NECESSARY

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. See toxicological information (Section 11)

SECTION 5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Suitable extinguishing media	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	None known
Specific hazards arising from the chemical	No specific fire or explosion hazard
Hazardous thermal decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides
Special protective actions for fire-fighters	No special measures are required.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE
EQUIPMENT AND EMERGENCY PROCEDURES

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
For emergency responders	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

METHODS AND MATERIALS FOR
CONTAINMENT AND CLEANING UP

Spill	Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
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SECTION 7. HANDLING AND STORAGE

Precautions for safe handling	Put on appropriate personal protective equipment (see Section 8).
Protective measures	Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed.
Advice on general occupational hygiene	Workers should wash hands and face before eating, drinking, and smoking. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	Store in accordance with local regulations. Do not store in unlabeled containers. Store in a cool, dry location. Any dust generated during handling or processing should be removed by wet mopping or vacuuming.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

Occupational exposure limits

INGREDIENT NAME	Exposure Limits
Silicon	NIOSH REL (United States, 10/2013)
	TWA: 5 mg/m ³ 10 hours. Form: Respirable fraction
	TWA: 10 mg/m ³ 10 hours. Form: Total
	OSHA PEL (United States, 2/2013)
	TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction
	TWA: 15 mg/m ³ 8 hours. Form: Total dust

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

INDIVIDUAL PROTECTION MEASURE

Hygiene measures

Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases, or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

SKIN PROTECTION

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection

Personal protective equipment for the body should be selected based on the task being performed, and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed, and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Physical state	Solid
Color	Black
Odor	None
Odor threshold	Not available
pH	Not known
Melting point/freezing point	Not applicable
Boiling point/boiling range	Not available
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Not available
Lower and upper explosive (flammable) limits	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Relative density	3.1
Solubility	Negligible solubility in water
Partition coefficient: n- octanol/water	Not applicable
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	No specific test data related to reactivity available for this product or its ingredients
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	None known
Incompatible materials	Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity	<table><tr><th>PRODUCT/INGREDIENT NAME</th><th>RESULT</th><th>SPECIES</th><th>DOSE</th><th>EXPOSURE</th></tr><tr><td>Silicon</td><td>LD50 Oral</td><td>Rat</td><td>3160 mg/kg</td><td>-</td></tr></table>						PRODUCT/INGREDIENT NAME	RESULT	SPECIES	DOSE	EXPOSURE	Silicon	LD50 Oral	Rat	3160 mg/kg	-		
PRODUCT/INGREDIENT NAME	RESULT	SPECIES	DOSE	EXPOSURE														
Silicon	LD50 Oral	Rat	3160 mg/kg	-														
Irritation/corrosion	<table><tr><th>PRODUCT/INGREDIENT NAME</th><th>RESULT</th><th>SPECIES</th><th>SCORE</th><th>EXPOSURE</th><th>OBSERVATION</th></tr><tr><td>Silicon</td><td>Eyes - Mild Irritant</td><td>Rabbit</td><td>-</td><td>3 mg</td><td>-</td></tr></table>						PRODUCT/INGREDIENT NAME	RESULT	SPECIES	SCORE	EXPOSURE	OBSERVATION	Silicon	Eyes - Mild Irritant	Rabbit	-	3 mg	-
PRODUCT/INGREDIENT NAME	RESULT	SPECIES	SCORE	EXPOSURE	OBSERVATION													
Silicon	Eyes - Mild Irritant	Rabbit	-	3 mg	-													
Sensitization	There is no data available.																	
Mutagenicity	There is no data available.																	
Carcinogenicity	There is no data available.																	
Reproductive toxicity	There is no data available.																	
Teratogenicity	There is no data available.																	
Specific target organ toxicity (single exposure)	There is no data available.																	
Specific target organ toxicity (repeated exposure)	There is no data available.																	
Aspiration hazard	There is no data available.																	
Information on the likely routes of exposure	Dermal Contact																	
POTENTIAL ACUTE HEALTH EFFECTS																		
Eye contact	No known significant effects or critical hazards																	
Inhalation	No known significant effects or critical hazards																	
Skin contact	No known significant effects or critical hazards																	
Ingestion	No known significant effects or critical hazards																	
DELAYED AND IMMEDIATE EFFECTS AND ALSO CHRONIC EFFECTS FROM SHORT AND LONG TERM EXPOSURE																		
Short term exposure																		
Potential immediate effects	No known significant effects or critical hazards																	
Potential delayed effects	No known significant effects or critical hazards																	
Long term exposure																		
Potential immediate effects	No known significant effects or critical hazards																	
Potential delayed effects	No known significant effects or critical hazards																	

SECTION 11. TOXICOLOGICAL INFORMATION, CONTINUED

POTENTIAL CHRONIC HEALTH EFFECTS

General	Chronic exposure to dusts may affect breathing capacity
Carcinogenicity	No known significant effects or critical hazards
Mutagenicity	No known significant effects or critical hazards
Teratogenicity	No known significant effects or critical hazards
Developmental effects	No known significant effects or critical hazards
Fertility effects	No known significant effects or critical hazards

NUMERICAL MEASURES OF TOXICITY

Acute toxicity estimates	There is no data available.
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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicological Information	There is no data available.
Persistence and degradability	There is no data available.
Bioaccumulative potential	

PRODUCT/INGREDIENT NAME	LogP _{ow}	BCF	POTENTIAL
Silicon	57 to 77		High

MOBILITY IN SOIL

Soil/water partition coefficient (K _{oc})	Not available
Other adverse effects	No known significant effects or critical hazards

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions, and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.
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SECTION 14. TRANSPORT INFORMATION

Disposal Methods		DOT	IMDG	IATA
	UN Number	Not regulated	Not regulated	Not regulated
	UN proper shipping name	-	-	-
	Transport hazard class(es)	-	-	-
	Packing group	-	-	-
	Environmental hazards	No	No	No
	Special precautions for user	-	-	-
	Additional information	-	-	-
	AERG : Not applicable			
Special precautions for user	Transport within users' premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.			

SECTION 15. REGULATORY INFORMATION

U.S. Federal regulations	TSCA 8(a) CDR Exempt/Partial exemption: Not determined
	United States inventory (TSCA 8b): All components are listed or exempted.
Clean Air Act Section 112	Not listed
(b) Hazardous Air Pollutants (HAPs)	
Clean Air Act Section 602 Class I Substances	Not listed
Clean Air Act Section 602 Class II Substances	Not listed
DEA List I Chemicals (Precursor Chemicals)	Not listed
DEA List II Chemicals (Essential Chemicals)	Not listed
SARA 302/304	Composition/information on ingredients: No products were found.
SARA 304 RQ	Not applicable
SARA 311/312	Not applicable
	Composition/information on ingredients

NAME	%	FIRE HAZARD	SUDDEN RELEASE OF PRESSURE	REACTIVE	IMMEDIATE (ACUTE) HEALTH HAZARD	DELAYED (CHRONIC) HEALTH HAZARD
Silicon	≥10 - ≤25	No	No	No	Yes	No

SARA 313 There is no data available.

SECTION 15. REGULATORY INFORMATION, CONTINUED

STATE REGULATIONS

Massachusetts	The following components are listed: Silicon carbide; Silicon
New York	None of the components are listed.
New Jersey	The following components are listed: Silicon carbide; Silicon
Pennsylvania	The following components are listed: Silicon carbide; Silicon
California Prop. 65	No products were found.

SECTION 16. OTHER INFORMATION

Procedure used to derive the classification	CLASSIFICATION	JUSTIFICATION
	Not classified	-

HISTORY

Date of issue mm/dd/yyyy	05/31/2023
Date of previous issue mm/dd/yyyy	12/30/2018
Version	2
Prepared by	Heeger Materials Inc.

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