



LTS Research Laboratories, Inc.  
Safety Data Sheet  
Silicon Carbide

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1. Product and Company Identification

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Trade Name: Silicon carbide  
Chemical Formula: SiC  
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.  
Street: 2001 Oaks Pkwy  
City: Belmont  
State: North Carolina  
Zip Code: 28012  
Country: USA  
Tel #: 855-587-2436 / 855-lts-chem

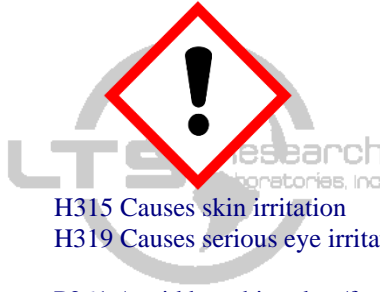
24-Hour Emergency Contact: 800-424-9300 (US & Canada)  
+1-703-527-3887 (International)

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2. Hazards Identification

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Signal Word: Warning



Hazard Statements: H315 Causes skin irritation  
H319 Causes serious eye irritation

Precautionary Statements: P261 Avoid breathing dust/fume/vapor  
P305+P351 If in eyes: Rinse cautiously with water for several minutes.

HMIS Health Ratings (0-4):

Health: 1  
Flammability: 0  
Physical: 0

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3. Composition

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Chemical Family: Ceramic  
Additional Names: Carborundrum, Moissanite

Silicon carbide (SiC):  
Percentage: 100 wt%  
CAS #: 409-21-2  
EC #: 206-991-8

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#### 4. First Aid Procedures

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|                     |   |
|---------------------|---|
| General Treatment:  | Seek medical attention if symptoms persist.   |
| Special Treatment:  | None  |
| Important Symptoms: | None  |
| Inhalation:         | Remove victim to fresh air. Supply oxygen if breathing is difficult.  |
| Ingestion:          | Give one to two glasses of water and induce vomiting. Never induce vomiting or give anything by mouth to an unconscious person. |
| Skin:               | Wash affected area with mild soap and water. Remove any contaminated clothing.  |
| Eyes:               | Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing    |

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#### 5. Fire and Explosion Hazards Data

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|                                |  |
|--------------------------------|--|
| Flammability:                  | Non-flammable  |
| Flash Point:                   | N/A  |
| Autoignition Temperature:      | N/A  |
| Extinguishing Media:           | No special restrictions – use suitable extinguishing agent for surrounding material and type of fire. Do not use water for metal fires – use CO <sub>2</sub> , sand, extinguishing powder. |
| Spec. Fire Fighting Procedure: | Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes.   |

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#### 6. Accidental Release Measures

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|----------------------------------|--|
| If Material Is Released/Spilled: | Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust. |
| Environmental Precautions:       | Isolate runoff to prevent environmental pollution.   |

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#### 7. Handling and Storage

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|                            |  |
|----------------------------|--|
| Handling Conditions:       | Wash thoroughly after handling.  |
| Storage Conditions:        | Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.                       |
| Work/Hygienic Maintenance: | Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air. |
| Ventilation:               | Provide sufficient ventilation to maintain concentration at or below threshold limit.  |

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#### 8. Exposure Controls and Personal Protection

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|                              |   |
|------------------------------|---|
| Permissible Exposure Limits: | 5 mg/m <sup>3</sup> as SiC, long term value                             |
| Threshold Limit Value:       | 3 mg/m <sup>3</sup> as SiC, non-fibrous                                 |
| Special Equipment:           | None  |
| Respiratory Protection:      | Dust Respirator   |
| Protective Gloves:           | Rubber gloves   |
| Eye Protection:              | Safety glasses or goggles   |
| Body Protection:             | Protective work clothing. Wear close-toed shoes and long sleeves/pants. |

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## 9. Physical and Chemical Characteristics

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|                   |  |
|-------------------|--|
| Color             | Dark grey or green   |
| Form:             | Powder, Granules, Pellets, Sputtering target, Custom parts |
| Odor:             | Odorless   |
| Water Solubility: | Insoluble  |
| Boiling Point:    | N/A  |
| Melting Point:    | 2730 °C  |
| Density:          | 3.22 g/cc  |
| Molecular weight: | 40.097 g/mol   |

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## 10. Reactivity

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|                                   |  |
|-----------------------------------|--|
| Stability:                        | Stable under recommended storage conditions                        |
| Reacts With:                      | Strong oxidizing agents  |
| Incompatible Conditions:          | Excess heat, Avoid dust formation                                  |
| Hazardous Decomposition Products: | Carbon monoxide, Carbon dioxide, Metal oxide fume, Silicon dioxide |

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## 11. Toxicological Information

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### Potential Health Effects:

|             |                              |
|-------------|------------------------------|
| Eyes:       | May cause serious irritation |
| Skin:       | May cause irritation         |
| Ingestion:  | Low absorption               |
| Inhalation: | May cause irritation         |
| Chronic:    | N/A                          |

### Signs & Symptoms:

N/A

### Aggravated Medical Conditions:

N/A

### Median Lethal Dose:

LD50 Oral- >2000 mg/kg for rat by mouth

### Carcinogen:

An examination of 53 silicon carbide crushers showed 15 cases of pneumoconiosis in workers employed on the crushing, sieving and packing of silicon carbide have been reported

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## 12. Ecological Information

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Ecological data is not available.

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## 13. Disposal Considerations

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Dispose of in accordance with local, state, national, and international regulations.

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## 14. Transportation Data

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|                       |                                   |
|-----------------------|-----------------------------------|
| Hazardous:            | Not hazardous for transportation. |
| Hazard Class:         | N/A                               |
| Packing Group:        | N/A                               |
| UN Number:            | N/A                               |
| Proper Shipping Name: | N/A                               |

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## 15. Regulatory Information

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|                                |     |
|--------------------------------|-----|
| Sec 302 Extremely Hazardous:   | No  |
| Sec 304 Reportable Quantities: | N/A |
| Sec 313 Toxic Chemicals:       | No  |

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## 16. Other Information

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This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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08/23/2023

