

MATERIAL SAFETY DATA SHEET

SÜD-CHEMIE
CREATING PERFORMANCE TECHNOLOGY



Hi-Tech Ceramics

1. PRODUCT AND COMPANY IDENTIFICATION

Product Names: **TRUCELL™, SiC, Ceramic Foam Filters**

Technical Specification (TS) Nos.: AL 6

Chemical Name: **Silicon Carbide (SiC)**

Company Name: **SÜD-CHEMIE**
Hi-Tech Ceramics, Inc.
P.O. Box 788
Alfred, New York 14802 USA

Technical Information: 1 (607) 587-9146 (USA)
24 HOUR EMERGENCY ASSISTANCE, (CHEMTREC) 1-800-424-9300

2. COMPOSITION/INFORMATION on INGREDIENTS

<u>Component</u> ¹	<u>CAS No.</u>	<u>% By Weight</u>	<u>OSHA PEL</u> ²		<u>ACGIH TLV</u> ³	
			Total / Respirable	---	Total / Respirable	---
Silicon Carbide (SiC)	409-21-2	>60	15	---	10	---
Aluminum Oxide (Al ₂ O ₃)	1344-28-1	30-35	15	5	10	---
Amorphous Silica (SiO ₂)*	7631-86-9	<5	80/%SiO ₂	---	10	3
Cristobalite (SiO ₂)	14464-46-1	<5	15/(%SiO ₂ +2)	5/(%SiO ₂ +2)	---	0.05

* Note: Amorphous silica is the non-crystalline form of SiO₂

¹ Ceramic solids defined as *preparations or mixtures*

² Occupational Safety and Health Administration (U.S.A.) - Permissible Exposure Limit, mg/m³

³ American Conference of Governmental Industrial Hygienists - Threshold Limit Value, mg/m³

3. HAZARD IDENTIFICATION

Potential Health Effect if Dust Is Generated by grinding or cutting:

Eye: Dust or particles may cause irritation.
Skin: N.A.
Ingestion: N.A .
Inhalation: Acute exposure to nuisance dust may result in upper respiratory irritation.
Chronic Effects: Long term breathing of respirable crystalline silica in concentrations greater than 0.05mg/m³ may lead to the development of silicosis and/or lung cancer.

NIOSH lists respirable crystalline silica (SiO₂) as a potential occupational human carcinogen.
IARC list respirable crystalline silica (SiO₂) as a known occupational human carcinogen.

4. FIRST AID MEASURES

Inhalation: Remove the person to dust free area.
Eye Contact: Flush eyes for at least 15 minutes with clean water. Seek medical attention should irritation persist.
Skin Contact: N.A.
Ingestion: N.A.

5. FIRE FIGHTING MEASURES

Flammable Properties: Non-flammable
Flash Point: None
Upper and Lower Flammability Limits: None
Autoignition Temperature: None
Special Fire Fighting Procedures: None

6. ACCIDENTAL RELEASE

Personal Precautions: If dust is generated during work activity due to grinding or cutting, approved respirator and safety glasses should be worn. Care should be exercised to minimize the generation of fugitive dusts when handling or machining this product.

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Cleanup Measures:

Dry sweeping of materials should be avoided to minimize dust emissions in the air. Settled dust and particles should be cleaned up using wet sweeping techniques or with a HEPA filtered vacuum.

7. HANDLING AND STORAGE

Handling: Handle so as not to create dust. Ceramic materials are brittle; care must be taken to prevent cracking or unsafe conditions may occur in contact with molten metal.

Storage: Keep product dry. If wet, potentially violent cracking may occur in contact with molten metal.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls: Machining or grinding can result in dust that may contain crystalline silica (SiO₂). Use local exhaust ventilation to control dust below exposure limits.

Respiratory Protection: NIOSH-approved respirator is recommended if PEL's or TLV's are exceeded.

Skin and Hand Protection: Abrasive resistant gloves.

Eye and Face Protection: Safety glasses with full side shields or goggles.

9. PHYSICAL and CHEMICAL PROPERTIES

Appearance: Gray Reticulated Ceramics

pH: N.A.

Melting Point: >1500⁰C

Explosive Properties: N.A.

Odor: None

Density: 0.5g/cm³

Flash Point: N.A

Solubility: None in water

10. STABILITY and REACTIVITY

Chemical Stability: Stable

Incompatibility: None

Hazardous Decomposition: May form increased quantities of crystalline silica, possibly including Cristobalite silica (SiO₂) after being exposed to high temperatures (>900⁰C) during product use. As a solid refractory shape, there is no consequential health hazard.

Polymerization: Will Not Occur

Conditions to Avoid: None

11. TOXICOLOGICAL INFORMATION

Long term inhalation to high concentrations of respirable crystalline silica has been shown to cause silicosis. Evidence exists that suggests chronic exposure to respirable crystalline silica may result in lung cancer, especially when combined with smoking.

12. ECOLOGICAL INFORMATION

None found.

13. DISPOSAL CONSIDERATION

During removal, exposure to respirable dust should be minimized by appropriate engineering controls and personal protective equipment. Loose material should be contained to prevent airborne dust.

Can be disposed of as non-hazardous waste in accordance with local, state and federal regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT - Not regulated as a hazardous material.

15. REGULATORY INFORMATION

U.S.A. Regulations (TSCA): The chemical components of this product are registered under the Toxic Substances Control Act where required.

Canadian Regulations (DSL): The chemical components of this product are listed on the Domestic Substance List.

European Community: The chemical components of this product are listed on the EINECS inventory as follows – Quartz (238-878-4), Aluminum Oxide (215-691-6)

16. OTHER INFORMATION

NONE
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The information contained in this Material Safety Data Sheet is believed to be accurate. However, Hi-Tech Ceramics, Inc. makes no warranty with respect to the accuracy of the information or the suitability of the recommendations and assumes no liability to any user based upon use of product or reliance upon the information contained in this Material Safety Data Sheet.