



MATERIAL SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

DESCRIPTION: Dura Therm™ 5G

1. Chemical Product and Company Identification

DESCRIPTION: Dura Therm™ 5G
 PRODUCT CODE: 79-1505.-.
 PRODUCT TYPE: Refractory Coating
 APPLICATION: Core/Mold Refractory Coating

Manufacturer/Supplier Information

MSDS prepared by:
 HA International, LLC
 630 Oakmont Lane
 Westmont, IL
 60559

For Emergency Medical Assistance
 Call Health & Safety Information Services
 1-866-303-6949

For additional health and safety or regulatory information, call (630)575-5722, or (630)575-5705.

2. Hazards Identification

2.1 Emergency Overview

Appearance	Black liquid
Odor	Characteristic

CAUTION!
 May cause eye irritation.

HMIS Rating

HEALTH	=	1 (slight)
FLAMMABILITY	=	0 (minimal)
REACTIVITY	=	0 (minimal)
CHRONIC	=	*

HMIS® ratings involve data interpretations that may vary from company to company. They are intended only for the rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

2.2 Potential Health Effects

Immediate Hazards

INGESTION:	No hazards known to company.
INHALATION:	Not expected to be harmful under normal conditions of use. However, if allowed to become airborne, may cause irritation of nose, throat and lungs.
SKIN:	May cause irritation on prolonged or repeated contact.
EYES:	May cause irritation on prolonged or repeated contact.

Delayed Hazards

14807-96-6 Talc

Can cause lung damage. Pre-existing respiratory disorders may be aggravated by exposure.
-- See Footnote at end of section

14808-60-7 Quartz (SiO₂)

CANCER HAZARD. Can cause cancer. Use of this product may generate silica dust (which may be invisible). Inhaled silica has been listed by NTP and classified by IARC as a human carcinogen.

Inhalation of silica dust may cause delayed lung injury or lung fibrosis (including silicosis and/or pneumoconiosis) and/or other diseases which may lead to permanent disability and/or death. Silicosis is a form of disabling pulmonary fibrosis which can be progressive. Prolonged exposure to respirable silica may cause diminished lung capacity with shortness of breath during physical exertion and may cause fatigue, breathlessness, wheezing, cough, and sputum production. Preexisting respiratory disorders may be aggravated by exposure. Smoking may aggravate the effects of exposure and may increase the risk of developing respiratory disease from exposure. Consult with your employer and your doctor for further information or if you believe you may be developing any breathing or lung problems. There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease. Silicosis is also reported to increase the risk of tuberculosis.

14940-68-2 Zircon (Zr(SiO₄))

Zirconium sands and flours contain trace quantities of naturally occurring radioactive uranium, thorium and radium. Overexposure by inhalation to respirable dusts may cause lung cancer. Observance of the 5 mg/m³ OSHA PEL for respirable dust will ensure that the user is within limits established for exposure to naturally occurring radioactive uranium, thorium and radium.

Footnote: As of the date of issuance of this document, this material has not been listed by NTP, classified by IARC nor regulated by OSHA as a carcinogen.

3. Composition, Information on Ingredients

The ingredients listed below have been associated with one or more immediate and/or delayed(*) health hazards. Risk of damage and effects depends upon duration and level of exposure. **BEFORE USING, HANDLING, OR EXPOSURE TO THESE INGREDIENTS, READ AND UNDERSTAND THE MSDS.**

		% by weight
14940-68-2	*Zircon (Zr(SiO ₄))	70.0 - 100.0
7782-42-5	Graphite	5.0 - 10.0
14807-96-6	*Talc	1.0 - 5.0
14808-60-7	*Quartz (SiO ₂)	0.1 - 1.0

Any applicable Canadian trade secret numbers will be listed in Section 15.2.

4. First Aid Measures

INGESTION:	If accidentally swallowed, dilute by drinking large quantities of water. If the individual is drowsy or unconscious, do not give anything by mouth. Immediately contact poison control center or hospital emergency room for advice on whether to induce vomiting or for any other additional treatment directions.
INHALATION:	Remove to fresh air.
SKIN:	In case of irritation, flush with water.
EYES:	Immediately flush eyes with plenty of water. Call a physician if irritation persists.

5. Fire Fighting Measures

Suitable Extinguishing Media: In case of fire, water should be used to keep fire-exposed containers cool.

Will not burn.

6. Accidental Release Measures

Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. For large spills, use water spray to disperse vapors and flush spill area. Prevent runoff from entering waterways or sewers. Use appropriate Personal Protective Equipment (PPE).

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing. Wash thoroughly after handling. Always use appropriate Personal Protective Equipment (PPE).

INHALATION:	Avoid prolonged or repeated breathing of vapor.
SKIN:	Avoid prolonged or repeated contact with skin and clothing.
EYES:	Avoid prolonged or repeated contact with eyes.

7.2 Storage

Keep container closed.

Keep container out of sun and away from heat.

Keep from freezing.

Store in a cool, dry place.

Empty container may contain product residues. DO NOT cut, torch or reuse without commercial cleaning.

Rotate stock--recommend using within 90 days from date of shipment.

Loosen closure cautiously before opening.

Not harmed by freezing, but thaw frozen product slowly and stir before using.

Use with adequate ventilation.

Do not store near strong oxidizing chemicals.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

14940-68-2		Zircon (Zr(SiO₄))	
ACGIH TLV	8-hr TWA	5 mg/m ³	Compound (as Zr)
	STEL (15 min)	10 mg/m ³	
OSHA PEL	8-hr TWA	5 mg/m ³	Compound (as Zr)
	Remanded STEL	10 mg/m ³	
7782-42-5		Graphite	
ACGIH TLV	8-hr TWA	2 mg/m ³	(All forms graphite except fibers)
OSHA PEL	Remanded TWA	2.5/(%SiO ₂ +2) mg/m ³	15 mppcf; respirable fraction respirable fraction; 1989 PEL remanded, but in effect in some states
14807-96-6		Talc	
ACGIH TLV	8-hr TWA	2 mg/m ³	(containing no asbestos) inhalable particulate, < 1% crystalline silica
OSHA PEL	8-hr TWA		20 mppcf; (no asbestos) respirable particulate, < 1% crystalline silica
	Remanded TWA	2 mg/m ³	(no asbestos) respirable particulate, < 1% crystalline silica; 1989 PEL remanded, but in effect in some states
14808-60-7		Quartz (SiO₂)	
ACGIH TLV	8-hr TWA	0.025 mg/m ³	respirable fraction; A2 - Suspected Human Carcinogen
OSHA PEL	8-hr TWA	10/(%SiO ₂ +2) mg/m ³	respirable dust
	8-hr TWA	30/(%SiO ₂ +2) mg/m ³	total dust
	Remanded TWA	0.1 mg/m ³	respirable dust; 1989 PEL remanded, but in effect in some states
NIOSH	8-hr TWA	0.05 mg/m ³	Respirable; Refer to NIOSH publications including Criteria Document for Crystalline Silica

8.2 Exposure Controls

If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should be provided to keep air contaminant concentration levels below acceptable criteria.

8.3 Personal Protection

Where air contaminants can exceed acceptable criteria, use NIOSH (42 CFR Part 84) approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminants in air in accordance with OSHA laws and regulations or other applicable standards or guidelines, including ANSI standards regarding respiratory protection. Use goggles if contact is likely. Wear impervious gloves as required to prevent skin contact.

9. Physical and Chemical Properties

Appearance	Black liquid
Odor	Characteristic
Odor threshold	Not available
pH	Not applicable
Freezing point	0 °C (32 °F)
Boiling point, 760 mm Hg	100 °C (212 °F)
Flash point	Non-flammable
Evaporation rate	Not available
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor pressure	Not applicable
Vapor density	Not available
Specific gravity	Greater than 1
Solubility in water	Dispersible
Octanol/water partition coefficient	Not available
Autoignition temperature	Not applicable
Viscosity	Not applicable

10. Stability and Reactivity

Chemical Stability

Normally stable as defined in NFPA 704-12(4-3.1).

Incompatible Materials

Strong oxidizers.

Hazardous Decomposition Products

CO, CO₂.

Possibility of Hazardous Reactions

Hazardous polymerization is not expected to occur .

Other Hazards

None known to company.

11. Toxicological Information

See Section 3 Hazards Identification information.

14940-68-2 Zircon (Zr(SiO₄))

LC50: Not available

LD50: Not available

7782-42-5 Graphite

LC50: Not available

LD50: Not available

14807-96-6 Talc

LC50: Not available

LD50: Not available

14808-60-7 Quartz (SiO₂)

LC50: Not available

LD50: Not available

12. Ecological Information

Not determined

13. Disposal Considerations

Recover free liquid. Absorb residue and dispose of according to local, state/provincial, and federal requirements.

14. Transport Information

14.1 U.S. Department of Transportation (DOT)

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

Regulation: Non regulated

14.2 Canadian Transportation of Dangerous Goods (TDG)

Regulation: Non regulated

14.3 Other Regulations

- **ADR/RID**

Regulation: Non regulated

- **IMO/IMDG**

Regulation: Non regulated

- **IATA (Commercial)**

Regulation: Non regulated

- **IATA (Passenger)**

Regulation: Non regulated

- **ADNR**

Regulation: Non regulated

15. Regulatory Information (Selected Regulations)

15.1 U.S. Federal Regulations

OSHA Hazards Communication Standard 29CFR1910.1200

This material presents possible health hazards as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

SARA Title III: Section 311/312

Immediate health hazard
Delayed health hazard

SARA Title III: Section 313 and 40 CFR Part 372

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

None required per SARA TITLE III SECTION 313.

TSCA Section 8(b) Inventory

All reportable chemical substances are listed on the TSCA Inventory. We rely on certifications of compliance from our suppliers for chemical substances not manufactured by us.

15.2 Canadian Regulations

Workplace Hazardous Materials Information System (WHMIS)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by the CPR.

Class D2A
Class D2B

Canadian Environmental Protection Act (CEPA)

All reportable chemical substances are listed on the Domestic Substances List (DSL) or otherwise comply with CEPA new substance notification requirements.

National Pollutant Release Inventory (NPRI)

This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory.

None required.

15.3 State Regulations

California Proposition 65

In accordance with Proposition 65, the following information is provided:

WARNING: This product contains the following chemical known to the State of California to cause cancer:

Chlorothalonil	1897-45-6
Silica, Crystalline	14808-60-7
Radionuclides	14940-68-2
Formaldehyde (gas)	50-00-0

16. Other Information

User's Responsibility

The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS) require that the information contained on these sheets be made available to your workers. Educate and train your workers regarding OSHA and WHMIS precautions. Instruct your workers to handle this product properly. Consult with appropriate experts to guard against hazards associated with use of this product and its ingredients.

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