

SAFETY DATASHEET Sid Harvey Item # 901906 STIC-TITE SDS # Z0437

(Following Regulations (EC) No 1907/2006 & (EC) No 1272/2008)

SDS Number: 130 Date of first issue: 18 October 2006 Date of last revision: 22 October 2014

1 - Identification of product

Tradenames: Super Stic-Tite,

Product Group

REFRACTORY COATING AND CEMENTS

Chemical Name

Mixture

Intended Release

Amorphous mineral wool fiber (MW) and fillers used as a high temperature insulating refractory material that when mixed with water will adhere to any clean suface

Trade Names

Super Stic Tite® Cement

Company

Morgan Advanced Materials

Thermal Ceramics Inc. P. O. Box 923; Dept. 300 Augusta, GA 30903-0923

For Product Stewardship and Emergency Information:

Hotline - 1-800-722-5681 Fax - 706-560-4054

For additional SDSs and to confirm this is the most current SDS for the product, visit our web page www.morganthermalceramics.com or send a request to MT.NorthAmerica@morganplc.com



2 - Hazard Identification

Emergency Overview

Dry, gray mixture of fine aggregates and fibrous wool. Fiber component can cause physical eye, skin and upper respiratory irritation. Dust contains respirable fiber. A mist/dust respirator must be worn during product application. Not a fire or spill hazard.

Possible Health Effects

Target Organs: Eyes, skin, nose and/or throat

Primary Entry Route: Inhalation

Acute effects: May cause temporary, mild mechanical irritation to the eyes, skin, nose and/or throat. Pre-existing skin and respiratory conditions

may be aggravated by exposure.

Chronic effects: Prolonged/repeated inhalation of respirable crystalline silica may cause delayed lung injury (e.g.: silicosis, lung cancer).

Hazard Classification Info

Dust samples from these products have not been tested for their specific toxicity, but may contain more than 0.1% crystalline silica, for which the following apply:

The International Agency for Research on Cancer (IARC) has classified crystalline silica inhaled in the form of quartz or cristobalite from occupational sources as carcinogenic to humans (Group 1).

The Ninth Annual Report on Carcinogens (2000), prepared by the National Toxicology Program (NTP), classified silica, crystalline (respirable size), as a substance known to be a human carcinogen.

The American Conference of Governmental Industrial Hygienists (ACGIH) has classified crystalline silica (quartz) as "A2-Suspected Human Carcinogen."

The State of California, pursuant to Proposition 65, The Safe Drinking Water and Toxic Enforcement Act of 1986, has listed "silica, crystalline (airborne particles of respirable size)" as a chemical known to the State of California to cause cancer.

The Canadian Workplace Hazardous Materials Information System (WHMIS) – Crystalline silica [quartz and cristobalite] is classified as Class D2A - Materials Causing Other Toxic Effects.

The Hazardous Materials Identification System (HMIS) –

Health: 0* Flammability: 0 Reactivity: 0 Personal Protection Index: X (Employer determined)

(* denotes potential for chronic effects)

3 - Composition / Information On Ingredients

COMPONENTS	<u>CAS NUMBER</u>	% BY WEIGHT
Mineral Wool Fiber	65997-17-3	25 - 50
Clay	1332-58-7	25 - 50
FlyAsh	68131-74-8	10 - 25
Sodium Phosphate	7601-54-9	0 - 1
Crystalline Silica (Quartz)	14808-60-7	0 - 1

(See Section 8 "Exposure Controls / Personal Protection" for exposure guidelines)

4 - First-Aid measures

4.1 - Eyes

Flush with large amounts of water for at least 15 minutes. Do not rub eyes.

4.2 - Skin

Wash affected area gently with soap and water. Skin cream or lotion after washing may be helpful.

4.3 - Respiratory Tract

Remove affected person to dust free location. See Section 8 for additional measures to reduce or eliminate exposure.

4.4 - Gastrointestinal

Unlikely route of exposure.

If symptoms persist, seek medical attention.



5 - Fire-fighting measures

5.1 - NFPA Codes

Flammability: 0 Health: 1 Reactivity: 0 Special: 0

5.2 - NFPA Unusual Hazards

None

5.3 - Flammable Properties

None

5.4 - Flash Point

None

5.5 - Hazardous decompostion products

None

5.6 - Unusual Fire and explosion hazard

None

5.7 - Extingushing media

Use extinguishing media suitable for type of surrounding fire

6 - Accidental Release Measures

Avoid creating airborne dust. Follow routine housekeeping procedures. Vacuum only with HEPA filtered equipment. If sweeping is necessary, use a dust suppressant and place material in closed containers. Do not use compressed air for clean-up. Personnel should wear gloves, goggles and approved respirator.

7 - Handling and storage

7.1 - Handling

Limit the use of power tools unless in conjunction with local exhaust. Use hand tools whenever possible. Frequently clean the work area with HEPA filtered vacuum or wet sweeping to minimize the accumulation of debris. Do not use compressed air for clean-up.

7.2 - Storage

Store in original container in a dry area. Keep container closed when not in use.

Product packaging may contain residue. Do not reuse.



8 - Risk Management Measures / Exposures Controls / Personal Protection

Exposure Limit/Guidelines Table

EXPOSURE GUIDELINES					
MAJOR COMPONENT	OSHA PEL	ACGIH TLV	MANUFACTURER'S REG		
Clay	Not Established	Not Establised	NONE		
Mineral Wool Fiber	Not Established	1 f/cc	1 f/cc		

OTHER OCCUPATIONAL EXPOSURE LEVELS (OEL)

Industrial hygiene standards and occupational exposure limits vary between countries and local jurisdictions. Check which exposure levels apply to your facility and comply with local regulations. If no regulatory dust or other standards apply, a qualified industrial hygienist can assist with a specific workplace evaluation including recommendations for respiratory protection.

Engineering controls

Use engineering controls, such as ventilation and dust collection devices, to reduce airborne particulate concentrations to the lowest attainable level.

PPE - Skin

Wear full body clothing, gloves, hat, and eye protection as necessary to prevent skin irritation. Washable or disposable clothing may be used. If possible, do not take unwashed work clothing home. If soiled work clothing must be taken home, employers should ensure employees are trained on the best practices to minimize or avoid non-work dust exposure (e.g., vacuum clothes before leaving the work area, wash work clothing separately, rinse washer before washing other household clothes, etc.).

PPE - Eve

Wear safety glasses with side shields or other forms of eye protection in compliance with appropriate OSHA standards to prevent eye irritation. The use of contact lenses is not recommended, unless used in conjunction with appropriate eye protection. Do not touch eyes with soiled body parts or materials. If possible, have eye-washing facilities readily available where eye irritation can occur.

PPE - Respiratory (general text)

When it is not possible or feasible to reduce airborne crystalline silica or particulate levels below the PEL through engineering controls, or until they are installed, employees are encouraged to use good work practices together with respiratory protection. Before providing respirators to employees (especially negative pressure type), employers should 1) monitor for airborne crystalline silica and/or dust concentrations using appropriate NIOSH analytical methods and select respiratory protection based upon the results of that monitoring, 2) have the workers evaluated by a physician to determine the workers' ability to wear respirators, and 3) implement respiratory protection training programs. Use NIOSH-certified particulate respirators (42 CFR 84), in compliance with OSHA Respiratory Protection Standard 29 CFR 1910.134 and 29 CFR 1926.103, for the particular hazard or airborne concentrations to be encountered in the work environment. For the most current information on respirator selection, contact your supplier.

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9 - Physical and chemical properties

ODOR & APPEARANCE

A dry, gray mixture of fine aggregates and fiber. No odor.

CHEMICAL FAMILY

Refractory cement

BOILING POINT

Not Applicable

WATER SOLUBILITY (%)

Not soluble in water

MELTING POINT

2000°F (1200°C)

SPECIFIC GRAVITY

Mixture

VAPOR PRESSURE

Not applicable

рΗ

9 to 10

VAPOR DENSITY (Air = 1)

Not applicable

% VOLATILE

Not applicable

MOLECULAR FORMULA

Not applicable

10 - Stability and Reactivity

Incompatabilities

Hydrofluoric acid, strong acid

Conditions to avoid

None

Hazardous decomposition products

Steam - This product will give off steam when initially exposed to elevated temperatures. In closed systems, this steam must have an avenue of escape to prevent pressure buildup during the drying out process.

Hazardous polymerization

Will not occur



11 - Toxicological information

Epidemiology

No studies have been undertaken on humans exposed to these products in occupational environments.

Mineral Woo

Epidemiological studies published during the 15 years prior to the 2001 IARC review provide no evidence of increased risk of cancer from occupational exposure during manufacture or use of mineral wool fiber.

Crystalline silica

Exposure to crystalline silica can cause silicosis, and exacerbate pulmonary tuberculosis and bronchitis. IARC (Monograph vol. 68, 1997) concluded that "crystalline silica from occupational sources inhaled in the form of quartz or cristobalite is carcinogenic to humans (Group 1)", and noted that "carcinogenicity in humans was not detected in all industrial circumstances studied" and "may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity".

Toxicology

Dust samples from these products have not been tested. They may contain respirable crystalline silica.

Mineral Wool

Fibers and dust from mineral wool can cause temporary mechanical irritation of the eyes and upper respiratory tract. Inhalation may cause coughing and nose and throat irritation.

In October 2001 the International Agency for Research on Cancer (IARC) concluded its re-evaluation of the carcinogenic risk of mineral wool fibers. The result was a reclassification of the fibers from Group 2B (possibly carcinogenic to humans) to Group 3 (not classifiable as to the carcinogenicity to humans).

Crystalline silica

Some samples of crystalline silica administered to rats by inhalation and intratracheal instillation have caused fibrosis and lung cancer. Mice and hamsters, similarly exposed, develop inflammatory disease including fibrosis but no lung cancer.

12 - Ecological information

Adverse effects of this material on the environment are not anticipated.

13 - Disposal Considerations

13.1 - Waste Management

To prevent waste materials from becoming airborne during waste storage, transportation and disposal, a covered container or plastic bagging is recommended. Comply with federal, state and local regulations.

13.2 - Disposal

If discarded in its purchased form, this product would not be a hazardous waste under Federal regulations (40 CFR 261) Any processing, use, alteration or chemical additions to the product, as purchased, may alter the disposal requirements. Under Federal regulations, it is the waste generator's responsibility to properly characterize a waste material, to determine if it is a hazardous waste. Check local, regional, state or provincial regulations to identify all applicable disposal requirements.

14 - Transport information

Hazard Class: Not Regulated United Nations (UN) Number: Not Applicable Labels: Not Applicable North America (NA) Number: Not Applicable

Placards: Not Applicable Bill of Lading: Product Name

INTERNATIONAL

Canadian TDG Hazard Class & PIN: Not regulated

Not classified as dangerous goods under ADR (road), RID (train), IATA (air) or IMDG (ship).

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15 - Regulatory information

UNITED STATES REGULATIONS

SARA Title III: This product does not contain any substances reportable under Sections 302, 304, 313 (40 CFR 372). Sections 311 and 312 apply.

OSHA: Comply with Hazard Communication Standards 29 CFR 1910.1200 and 29 CFR 1926.59 and Respiratory Protection Standards 29 CFR 1910.134 and 29 CFR 1926.103.

TSCA: All substances contained in this product are listed, if required, in the TSCA Chemical Inventory. **California:** "Silica, crystalline (airborne particles of respirable size)" is listed in Proposition 65, The Safe Drinking Water and Toxic Enforcement Act of 1986 as a chemical known to the State of California to cause cancer.

Other States:Crystalline silica products are not known to be regulated by states other than California; however, state and local OSHA and EPA regulations may apply to these products. Contact your local agency if in doubt.

INTERNATIONAL REGULATIONS

Canadian WHMIS: Class D-2A Materials Causing Other Toxic Effects

Canadian EPA: All substances in this product are listed, as required, on the Domestic Substance List (DSL).

16 - Other Information

Morgan Thermal Ceramics www.morganthermalceramics.com

SARATITLE III HAZARD CATEGORIES

Acute Health: No Pressure Hazard: No Chronic Health: Yes Reactivity Hazard: No

Fire Hazard: No

TECHNICAL DATA SHEETS

Wendy: Please insert TDSs

Revision Summary

Section 16: Disclaimer Updated

SDS prepared by

SDS Prepared By: MORGAN THERMAL CERAMICS ENVIRONMENTAL, HEALTH & SAFETY DEPARTMENT

Disclaimer

The information presented herein is presented in good faith and believed to be accurate as of the effective date of this Material Safety Data Sheet. Employers may use this MSDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of the product. This summary of the relevant data reflects professional judgment; employers should note that information perceived to be less relevant has not been included in this MSDS. Therefore, given the summary nature of this document, Morgan Thermal Ceramics does not extend any warranty (expressed or implied), assume any responsibility, or make any representation regarding the completeness of this information or its suitability for the purposes envisioned by the user.



MATERIAL SAFETY DATA SHEET

MSDS No: 130 Date Prepared: 10/18/2006 Current Date: 10/18/2006

Last Revised: (10/18/2006)

1. PRODUCT AND COMPANY IDENTIFICATION

Product Group: Refractory Coating and Cements

Chemical Name: Inorganic, Oxides

Intended Use: Amorphous mineral wool fiber (MW) and fillers used as a high temperature insulating

refractory material that when mixed with water will adhere to any clean suface.

Trade Names: SUPER STIC TITE® CEMENT

Manufacturer/Supplier: Thermal Ceramics Inc.

P. O. Box 923; Dept. 300 Augusta, GA 30903-0923

For Product Stewardship and Emergency Information -

Hotline: 1-800-722-5681 Fax: 706-560-4054

For additional MSDSs and to confirm this is the most current MSDS for the

product, visit our web page [www.thermalceramics.com]

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT & CAS NUMBER	% BY WEIGHT	OSHA PEL	ACGIH TLV
Mineral Wool Fiber 65997-17-3	25 - 50	None Established	1 f/cc
Clay 1332-58-7	25 - 50	See Note (1)	None Established
Fly Ash 68131-74-8	10 - 25	15 mg/m³ (total dust); 5 mg/m³ (respirable dust)	10 mg/m³ (inhalable dust) 3 mg/m³ (respirable dust)
Sodium Phosphate 7601-54-9	0 - 1	None Established	2 mg/m ³
Crystalline Silica 14808-60-7	0 - 1	See Note (1)	0.05 mg/m ³

NOTES:

(See Section 8 "Exposure Controls / Personal Protection" for exposure guidelines.)

Depending on the percentage and type(s) of silica in the mineral, the OSHA Permissible Exposure Limit (PEL) for respirable dust containing crystalline silica (8 HR TWA) is based on the formula listed in 29 CFR 1910.1000, "Air Contaminants" under Table Z-3, "Mineral Dust". For quartz containing mineral dust, the PEL = 10 mg/m³ / (% of silica + 2); for cristobalite or tridymite, the PEL = 5 mg/m³ / (% of silica + 2); for mixtures, the PEL = 10 mg/m³ / (% of quartz + 2 (% of cristobalite) + 2 (% of tridymite) + 2).

MSDS No: 130 Date Prepared: 10/18/2006 Current Date: 10/18/2006

Last Revised: (10/18/2006)

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Dry, gray mixture of fine aggregates and fibrous wool. Fiber component can cause physical eye, skin and upper respiratory irritation. Dust contains respirable fiber. A mist/dust respirator must be worn during product application. Not a fire or spill hazard.

POSSIBLE HEALTH EFFECTS

Target Organs: Eyes, skin, nose and/or throat

Primary Entry Route: Inhalation

Acute effects: May cause temporary, mild mechanical irritation to the eyes, skin, nose and/or throat. Pre-

existing skin and respiratory conditions may be aggravated by exposure.

Chronic effects: Prolonged/repeated inhalation of respirable crystalline silica may cause delayed lung injury

(e.g.: silicosis, lung cancer).

HAZARD CLASSIFICATION

Dust samples from these products have not been tested for their specific toxicity, but may contain more than 0.1% crystalline silica, for which the following apply:

The International Agency for Research on Cancer (IARC) has classified crystalline silica inhaled in the form of quartz or cristobalite from occupational sources as carcinogenic to humans (Group 1).

The Ninth Annual Report on Carcinogens (2000), prepared by the **National Toxicology Program (NTP)**, classified silica, crystalline (respirable size), as a substance known to be a human carcinogen.

The American Conference of Governmental Industrial Hygienists (ACGIH) has classified crystalline silica (quartz) as "A2-Suspected Human Carcinogen."

The **State of California**, pursuant to Proposition 65, The Safe Drinking Water and Toxic Enforcement Act of 1986, has listed "silica, crystalline (airborne particles of respirable size)" as a chemical known to the State of California to cause cancer.

The Canadian Workplace Hazardous Materials Information System (WHMIS) – Crystalline silica [quartz and cristobalite] is classified as Class D2A - Materials Causing Other Toxic Effects.

The Hazardous Materials Identification System (HMIS) -

Health: 2* Flammability: 0 Reactivity: 0 Personal Protection Index: X (Employer determined)

(* denotes potential for chronic effects)

4. FIRST AID MEASURES

EYE IRRITATION:

Flush with large amounts of water for at least 15 minutes. Do not rub eyes.

SKIN IRRITATION:

Wash affected area gently with soap and water. Skin cream or lotion after washing may be helpful.

INGESTION:

Unlikely route of exposure.

INHALATION:

Remove affected person to dust free location. See Section 8 for additional measures to reduce or eliminate exposure.

- If symptoms persist, seek medical attention. -

MSDS No: 130 Date Prepared: 10/18/2006 Current Date: 10/18/2006

Last Revised: (10/18/2006)

5. FIRE FIGHTING MEASURES

NFPA CODES: Flammability: <u>0</u>, Health: <u>0</u>, Reactivity: <u>0</u>, Special: <u>0</u>

NFPA Unusual Hazards: None Flash Point: None

Extinguishing Media: Use extinguishing media suitable for type of surrounding fire.

Explosion Hazards: None **Hazardous Decomposition Products:** None

6. ACCIDENTAL RELEASE MEASURES

SPILL/LEAK PROCEDURES:

Avoid creating airborne dust. Follow routine housekeeping procedures. Vacuum only with HEPA filtered equipment. If sweeping is necessary, use a dust suppressant and place material in closed containers. <u>Do not use compressed air for clean-up</u>. Personnel should wear gloves, goggles and approved respirator.

7. HANDLING AND STORAGE

STORAGE

Store in original factory container in a dry area. Keep container closed when not in use.

EMPTY CONTAINERS

Product packaging may contain residue. Do not reuse.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Use engineering controls, such as ventilation and dust collection devices, to reduce airborne particulate concentrations to the lowest attainable level.

RESPIRATORY PROTECTION

When it is not possible or feasible to reduce airborne crystalline silica, fiber or particulate levels below the PEL through engineering controls, or until they are installed, employees are encouraged to use good work practices together with respiratory protection. Before providing respirators to employees (especially negative pressure type), employers should 1) monitor for airborne crystalline silica, fiber or dust concentrations using appropriate NIOSH analytical methods and select respiratory protection based upon the results of that monitoring, 2) have the workers evaluated by a physician to determine the workers' ability to wear respirators, and 3) implement respiratory protection training programs. Use NIOSH-certified particulate respirators (42 CFR 84), in compliance with OSHA Respiratory Protection Standard 29 CFR 1910.134 and 29 CFR 1926.103, for the particular hazard or airborne concentrations to be encountered in the work environment. For the most current information on respirator selection, contact your supplier.

PROTECTIVE CLOTHING

Wear full body clothing, gloves, hat, and eye protection as necessary to prevent skin irritation. Washable or disposable clothing may be used. If possible, do not take unwashed work clothing home. If soiled work clothing must be taken home, employers should ensure employees are trained on the best practices to minimize or avoid non-work dust exposure (e.g., vacuum clothes before leaving the work area, wash work clothing separately, rinse washer before washing other household clothes, etc.).

EYE PROTECTION

Wear safety glasses with side shields or other forms of eye protection in compliance with appropriate OSHA standards to prevent eye irritation. The use of contact lenses is not recommended, unless used in conjunction with appropriate eye protection. Do not touch eyes with soiled body parts or materials. If possible, have eye-washing facilities readily available where eye irritation can occur.

MSDS No: 130 Date Prepared: 10/18/2006 Current Date: 10/18/2006 Last Revised: (10/18/2006)

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR AND APPEARANCE: A dry, gray mixture of fine aggregates and fiber. No odor.

CHEMICAL FAMILY: Refractory cement
BOILING POINT: Not applicable
WATER SOLUBILITY (%): Not soluble in water
MELTING POINT: > 2000 € (1200 ℃)

SPECIFIC GRAVITY: Mixture

VAPOR PRESSURE: Not applicable

oH: 9 - 10

VAPOR DENSITY:

VOLATILE BY VOLUME (%):

MOLECULAR FORMULA:

Not applicable

Not Applicable

10. STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION: Will not occur

CHEMICAL INCOMPATIBILITIES: Hydrofluoric acid, strong acid

HAZARDOUS DECOMPOSITION PRODUCTS: Steam - This product will give off steam when initially exposed to

elevated temperatures. In closed systems, this steam must have an avenue of escape to prevent pressure buildup during the drying out

process.

11. TOXICOLOGICAL INFORMATION

TOXICOLOGY

Dust samples from these products have not been tested. They may contain respirable crystalline silica.

Mineral Wool

Fibers and dust from mineral wool can cause temporary mechanical irritation of the eyes and upper respiratory tract. Inhalation may cause coughing and nose and throat irritation.

In October 2001 the International Agency for Research on Cancer (IARC) concluded its re-evaluation of the carcinogenic risk of mineral wool fibers. The result was a reclassification of the fibers from Group 2B (possibly carcinogenic to humans) to Group 3 (not classifiable as to the carcinogenicity to humans).

Crystalline silica

Some samples of crystalline silica administered to rats by inhalation and intratracheal instillation have caused fibrosis and lung cancer. Mice and hamsters, similarly exposed, develop inflammatory disease including fibrosis but no lung cancer.

EPIDEMIOLOGY

No studies have been undertaken on humans exposed to these products in occupational environments.

Mineral Wool

Epidemiological studies published during the 15 years prior to the 2001 IARC review provide no evidence of increased risk of cancer from occupational exposure during manufacture or use of mineral wool fiber.

Crystalline silica

Exposure to crystalline silica can cause silicosis, and exacerbate pulmonary tuberculosis and bronchitis. IARC (Monograph vol. 68, 1997) concluded that "crystalline silica from occupational sources inhaled in the form of quartz or cristobalite is carcinogenic to humans (Group 1)", and noted that "carcinogenicity in humans was not detected in all industrial circumstances studied" and "may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity".

MSDS No: 130 Date Prepared: 10/18/2006 Current Date: 10/18/2006 Last Revised: (10/18/2006)

12. ECOLOGICAL INFORMATION

Adverse effects of this material on the environment are not anticipated.

13. DISPOSAL INFORMATION

WASTE MANAGEMENT

To prevent waste materials becoming airborne during waste storage, transportation and disposal, a covered container or plastic bagging is recommended. Comply with federal, state and local regulations.

DISPOSAL

If discarded in its purchased form, this product would not be a hazardous waste under Federal regulations (40 CFR 261) Any processing, use, alteration or chemical additions to the product, as purchased, may alter the disposal requirements. Under Federal regulations, it is the waste generator's responsibility to properly characterize a waste material, to determine if it is a hazardous waste. Check local, regional, state or provincial regulations to identify all applicable disposal requirements.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

Hazard Class:Not RegulatedUnited Nations (UN) Number:Not ApplicableLabels:Not ApplicableNorth America (NA) Number:Not ApplicablePlacards:Not ApplicableBill of Lading:Product Name

INTERNATIONAL

Canadian TDG Hazard Class & PIN: Not regulated

Not classified as dangerous goods under ADR (road), RID (train) or IMDG (ship).

15. REGULATORY INFORMATION

UNITED STATES REGULATIONS

SARA Title III: This product does not contain any substances reportable under Sections 302, 304, 313 (40

CFR 372). Sections 311 and 312 apply.

OSHA: Comply with Hazard Communication Standards 29 CFR 1910.1200 and 29 CFR 1926.59

and Respiratory Protection Standards 29 CFR 1910.134 and 29 CFR 1926.103.

TSCA: All substances contained in this product are listed in the TSCA Chemical Inventory

California: "Silica, crystalline (airborne particles of respirable size)" is listed in Proposition 65, The Safe

Drinking Water and Toxic Enforcement Act of 1986 as a chemical known to the State of

California to cause cancer.

Other States: Crystalline silica products are not known to be regulated by states other than California;

however, state and local OSHA and EPA regulations may apply to these products. Contact

your local agency if in doubt.

INTERNATIONAL REGULATIONS

Canadian WHMIS: Class D-2A Materials Causing Other Toxic Effects

Canadian EPA: All substances in this product are listed, as required, on the Domestic Substance List (DSL).

16. OTHER INFORMATION

SARA TITLE III HAZARD CATEGORIES

Acute Health:NoPressure Hazard:NoChronic Health:YesReactivity Hazard:No

Fire Hazard: No

MSDS No: 130 Date Prepared: 10/18/2006 Current Date: 10/18/2006

Last Revised: (10/18/2006)

DEFINITIONS:

ACGIH: American Conference of Governmental Industrial Hygienists
ADR: Carriage of Dangerous Goods by Road (International Regulation)

CAA: Clean Air Act

CAS: Chemical Abstracts Service Registry Number

CERCLA: Comprehensive Environmental Response, Compensation and Liability Act

EPA: Environmental Protection Agency

EU: European Union

f/cc: Fibers per cubic centimeter
HEPA: High Efficiency Particulate Air

HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code

mg/m³: Milligrams per cubic meter of air
mppcf: Million particles per cubic meter
MSHA: Mine Safety and Health Administration
NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

PNOC: Particulates Not Otherwise Classified
PNOR: Particulates Not Otherwise Regulated
RCRA: Resource Conservation and Recovery Act

RID: Carriage of Dangerous Goods by Rail (International Regulation)

SARA: Superfund Amendments and Reauthorization Act

Title III: Emergency Planning and Community Right to Know Act

...Section 302: Extremely Hazardous Substances

...Section 304: Emergency Release ...Section 311: MSDS/List of Chemicals

...Section 312: Emergency and Hazardous Inventory ...Section 313: Toxic Chemicals Release Reporting

STEL: Short-Term Exposure Limit

TCLP: Toxicity Characteristics Leaching Procedures (EPA)

TLV: Threshold Limit Values (ACGIH)
TSCA: Toxic Substance Control Act

WHMIS: Workplace Hazardous Materials Information System (Canada)

29 CFR 1910.134 & 1926.103: OSHA Respiratory Protection Standards 29 CFR 1910.1200 & 1926.59: OSHA Hazard Communication Standards

Revision Summary: New MSDS.

MSDS Prepared By: THERMAL CERAMICS ENVIRONMENTAL, HEALTH & SAFETY DEPARTMENT

DISCLAIMER

The information presented herein is presented in good faith and believed to be accurate as of the effective date of this Material Safety Data Sheet. Employers may use this MSDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of the product. This summary of the relevant data reflects professional judgment; employers should note that information perceived to be less relevant has not been included in this MSDS. Therefore, given the summary nature of this document, Thermal Ceramics does not extend any warranty (expressed or implied), assume any responsibility, or make any representation regarding the completeness of this information or its suitability for the purposes envisioned by the user.