

## Material Safety Data Sheet

### 1. Company & Product Information

Company Name:

UniTherm Insulation Systems

711 Jones Street

Lewisville, Texas 75057

p | 800.657.9542 f | 972.436.0112

Product:

Stainless Steel Wire Mesh

Color: Silver

Odor: Odorless

### 2. Hazardous Ingredients

Ingredients	CAS No.	TLV	PEL	Ingredients	CAS No.	TLV	PEL
Aluminum (Al)	7429-90-5	10	15	Molybdenum (Mo)	7439-98-7	10	15
Chromium (Cr)	1440-47-3	0.5	1	Nickel (Ni)	7440-02-0	1	1
Copper (Cu)	7440-50-8	1	1	Niobium (Nb)	7440-03-1	None	None
Iron (Fe)	1309-37-1	None	None	Silicon (Si)	7440-21-3	10	15
Manganese (Mn)	7439-96-5	.02	5	Titanium (Ti)	7440-32-6	None	None

### 3. Alloy and Composition

Alloy	Mn	Si	Cr	Ni	Mo	Fe	Other
S177	0.0-1.0		16.0-18.0	6.5-7.8	2.0-3.0	REM	Al 0.75-1.5
S216	7.5-9.0		17.5-22.0	5.0-7.0		"	
S2209	0.5-2.0		21.5-23.5	7.0-9.0	2.5-3.5	"	
S302, S302H	0.0-2.0		17.0-19.0	8.0-10.0		"	
S302HQ	0.0-2.0		17.0-19.0	8.0-10.0		"	Cu 3.0-4.0
S304, 304L, 304H	0.0-2.0		18.0-20.0	8.0-10.5		"	
S305, S305HQ	0.0-2.0		17.0-19.0	10.5-13.0		"	
S308, S308L, S308LSI	0.0-2.5		19.0-22.0	9.0-12.0		"	
S309, S309L, S309LSI	0.0-2.5		22.0-25.0	12.0-15.0		"	
S310, S310S	0.0-2.5		24.0-28.0	19.0-22.5		"	
S312	0.0-2.5		28.0-32.0	8.0-10.5		"	
S31254	0.0-2.0		19.5-20.5	10.5-13.0		"	
S314	0.0-2.0	0.0-2.5	23.0-26.0	19.0-22.0		"	

<b>Alloy</b>	<b>Mn</b>	<b>Si</b>	<b>Cr</b>	<b>Ni</b>	<b>Mo</b>	<b>Fe</b>	<b>Other</b>
S316, S316L, S316LSI	0.0-2.5		16.0-20.0	10.0-14.0		"	
S317, S317L	0.0-2.5		18.0-20.5	11.0-15.0	2.0-3.0	"	
S321	0.0-2.0		17.0-19.0	9.0-12.0	3.0-4.0	"	Ti 0.1-1.0
S347	0.0-2.5		17.0-21.5	9.0-12.0		"	Nb+Ta 0.1-1.0
S35/19CB	0.0-2.5	0.75-2.0	19.0-21.0	34.0-37.0		"	Nb+Ta 0.75-1.5
S409/S409CB			10.5-12.5	0.0-0.6		"	Ti 0.1-1.0
S410,S401L			11.5-13.5	0.0-0.6		"	
S420			12.0-14.0	0.0-0.6		"	
S430			16.0-18.0	0.0-0.3		"	
S434A			16.0-18.0	0.0-0.5		"	Cu 0.75-1.25
S446	0.0-1.5		23.0-27.0	0.0-0.5		"	

## 4. Physical Data

Solid silver colored metal wire. S.G. = 7.8-8.0 g/cm<sup>3</sup> , M.P. = 2498-2804°F

## 5. Fire and Explosion Data

Non-flammable, non-explosive, CAUTION: Welding arcs and sparks can ignite flammable gases and combustible liquids and solids.

## 6. Reactivity Data

High temperature cutting and welding produce hazardous fumes and gases. The constituents of the fume may include oxides and silicates of elements in the base metal, filler metal, and any coatings present. Gases are generated during welding by heat or reaction between ultraviolet radiation and air. The gases are dependent on the alloy being welded, the process, and electrodes used. the following decomposition products and exposure limits apply to brazing, welding, and high temperature work areas. Determine actual exposure by industrial hygiene monitoring

<b>Substance</b>	<b>TLV</b>	<b>PEL</b>	<b>Substances</b>	<b>TLV</b>	<b>PEL</b>
<b>Aluminum Fume</b>	5	5	<b>Nickel (soluble)</b>	0.1	1
<b>Carbon Monoxide</b>		55	<b>Nitrogen Dioxide</b>	9 (c)	
<b>Chromium (Chromates)</b>	0.05	.1 (c)	<b>Ozone</b>	0.20 (c)	0.2 (c)
<b>Copper Fume</b>	0.2	0.1	<b>Silica (amorphous)</b>	10	80
<b>Iron Oxide Fume</b>	5	10	<b>Titanium Oxide</b>	10	15
<b>Manganese Fume</b>	0.2	5 (c)	<b>Welding Fume</b>	5	5
<b>Molybdenum (soluble)</b>	5	5	<b>(Total Particulate)</b>		

## 7. Toxicological Properties

**Routes of Entry:** Inhalation of the dust and fume, eye or skin contact with dust or fume.

**Short Term Exposure:** Acute exposure may cause irritation of the eyes or skin. Inhalation may give a metallic taste, head ache, nausea, chills, fever, irritation of the respiratory tract, cough.

**Long Term Exposure:** Chronic exposure may cause skin sensation, asthma, bronchitis, lung fibrosis or pneumoniosis. It may also cause damage to the kidneys and liver as well as the nervous system. Chromates and soluble nickel compounds are confirmed human carcinogens.

## 8. Precautions for Safe Handling and Use

If dust or fume gets into eyes, irrigate immediately. If irritation persists, seek medical attention. If contact with skin occurs, wash with soap and water. If a rash develops, seek medical attention. If person breathes in large amounts of dust and fume, remove from exposure. Seek medical help if respiratory irritation persists.

## 9. Control Measures

**Eye protection and protective clothing:** Safety equipment when brazing, cutting or welding should include nonflammable clothing, gloves and glasses, goggles or face shields with the appropriate lens shade.

**Respiratory protection:** Necessary when exposure limits are exceeded. Use an air supplied respirator in confined spaces. Keep head out of fumes. Use industrial hygiene air monitoring to ensure that TLV or PEL values are not exceeded.

**Ventilation:** Ensure adequate ventilation or use local exhaust when brazing, cutting or welding. Special precaution should be taken in confined spaces.

**Waste Disposal:** The wire is non-toxic. Recycle or dispose according to local regulation.

# Aramid Stainless Steel Thread



## Material Safety Data Sheet

### 1. Company & Product Information

Company Name:  
UniTherm Insulation Systems  
711 Jones Street  
Lewisville, Texas 75057  
p | 800.657.9542 f | 972.436.0112

Product:  
Aramid Stainless Steel Thread

### 2. Ingredients

Ingredient Name	CAS No.	Weight (%)
Poly	26125-61-1	> 70 %
Polyterafluoroethylene (PTFE)	9002-84-0	0 - 20 %
Stainless Steel Wire		0 - 10 %

### 3. Hazards Identification

**Physical Appearance and Immediate Concerns:** Yellow/brown color solid thread with no odor. Material is insoluble, chemically inert, non-biodegradable.

**Immediate Concerns:** Inhalation of the thermal decomposition products, arising from high temperature or fire, is hazardous to health. Contamination of tobacco products must be avoided.

#### Potential Health Hazards

**Skin:** Cutting or abrading material may produce small amounts of fiber particles may cause skin irritation.

**Eye Inhalation:** Not a likely route of entry.

**Inhalation:** Inhalation of fumes from burning or heating above 600°F can cause polymer fume fever.

**Ingestion:** Not a likely route of entry. Ingestion can cause gastrointestinal tract irritation.

## 4. First Aid Measures

n/a for material as supplied at room temperature.

Processing at high temperature may generate fumes which can cause flu-like symptoms. Remove to fresh air, consult a physician if severe.

## 5. Fire Fighting Measures

**Flash point:** n/a

**Auto Ignition Temperature:** n/a

**Flammable Limits in Air:** n/a, solid material

**Extinguishing Media:** Use media appropriate to primary source of fire.

**Unusual Fire Hazards:** Material is incombustible but if other fuel is present decomposition products will burn at about 1275°F, producing toxic and corrosive gaseous products.

## 6. Accidental Release Measures

n/a, solid material

## 7. Handling And Storage

Store and handle using good warehouse practices. Avoid contamination of tobacco products.

## 8. Exposure Control - Personal Protection

**Engineering Controls:** n/a

**Personal Protective Equipment:** Use appropriate NIOSH-approved respirator in the presence of dust or decomposition fumes.

**Eye and Face:** Use of safety glasses is recommended.

**Hands, Arm, and Body:** Material is small in diameter yet relatively strong, and can produce cuts, particularly if being rewound or transferred at a high speed.

### Exposure Guidelines

<b>Ingredient Name:</b>	<b>ACGIH TLV mg/m3:</b>	<b>OSHA PEL mg/m3:</b>
<b>Polytetrafluoroethylene (PNOC)</b>	15 (total dust)	10 (inhalation fraction)
<b>Particulates Not Otherwise Classified:</b>	5 (respirable dust)	3 (respirable fraction)
<b>Fibrous Glass Dust:</b>	15 (total dust) 5 (respirable dust)	5 (inhalation fraction) 3 (PNOC)

## 9. Physical And Chemical Properties

<b>Appearance:</b>	Stable
<b>Physical State:</b>	Strong oxidizers, acids, and bases.
<b>Odor:</b>	None
<b>Specific Gravity:</b>	2.2 +/-
<b>Solubility in Water:</b>	Insoluble

## 10. Stability And Reactivity

<b>Stability:</b>	Stable
<b>Incompatibilities:</b>	Strong oxidizers, acids, and bases.
<b>Hazardous Combustible Products</b>	Thermal decomposition may produce toxic and corrosive gaseous products.
<b>Hazardous Polymerization</b>	Hazardous polymerization will not occur.

## 11. Toxicological Information

<b>Immediate (acute) effects:</b>	No acute effects have been identified.
<b>Delayed Effects:</b>	No delayed or chronic effects have been identified.
<b>Other Data:</b>	n/a

## 12. Ecological Information

No ecotoxicological information is available for this material.

## 13. Disposal Consideration

Waste Disposal: Material as supplied is not a hazardous waste according to RCRA. Landfill according to current federal, state, and local regulations, or incinerate in high-temperature incinerator designed to burn fluoride-containing materials. Processing, use or contamination may make this information inaccurate or incomplete.

## 14. Transport Information

<b>US DOT Hazard Class:</b>	n/a
<b>US DOT Hazard Class:</b>	n/a

## 15. Regulatory Information

**TSCA Status:** Each ingredient is on the inventory.

**NRS Status (Canada):** Each ingredient is on the DSL.

**SARA Title III:** **Hazard Categories**

Acute Health: yes

Chronic Health: no

Fire: no

Pressure Hazard: no

Reactivity: no

**Reportable Ingredients**

Sec.: 313: n/a

Sec.: 302: none

## Material Safety Data Sheet

### 1. Company & Product Information

**Company Name:**

DS Industries  
711 Jones Street  
Lewisville, Texas 75057

**General Use:**

High temperature insulation

**Material Name:**

Ceramic fiber, Aluminum silicate refractory fiber,  
Refractory ceramic fiber (RCF)

**Product Series:**

1260°C ceramic fiber

**Product:**

Aluminum Silicate Fiber

### 2. Composition / Information on Ingredients

**Chemical Indexes:**

$\text{Al}_2\text{O}_3 + \text{SiO}_2 > 97\%$

$\text{Al}_2\text{O}_3 > 45\%$

$\text{Fe}_2\text{O}_3 < 1.0\%$

$\text{Na}_2\text{O} + \text{K}_2\text{O} \leq 0.5\%$

### 3. Hazards Identification

Dust from this product generated by handling may cause skin, eye and respiratory tract irritation. Possible hazards depend on duration and level of exposure.

**Hazardous Materials Information System (HMIS) Ratings:**

**Health:** 1

**Flammability:** 0

**Reactivity:** 0

**Personal Protection Index:** X

**Possible Effects on Health:**

Prolonged and repeated inhalation of aluminosilicate dust may cause chronic effects on respiratory system such as bronchitis, asthma, and emphysema signs.

**Eye Contact:** Physical irritation

**Skin Contact:** Physical Irritation

**Ingestion:** Temporary irritation to gastrointestinal tract

**Inhalation:** Pulmonary dysfunction



## 4. First Aid Measures

- Eye Contact:** If eyes become irritated, wash immediately with large amounts of lukewarm water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Do not rub eyes. Seek medical attention if irritation persists.
- Skin Contact:** If skin becomes irritated, do not rub or scratch exposed skin. Wash area of contact thoroughly with soap and water. Using a skin cream or lotion after washing may be helpful. Change into clean clothing.
- Ingestion:** Relocate affected individual to an environment of clean and fresh air. Drink plenty of water seek medical help if symptoms persist.
- Inhalation:** Remove affected individual to a dust free place, seek medical help if irritation persists.

## 5. Fire Fighting Measures

Non-combustible (does not burn) product.

- Auto-ignition temperature:** None
- NFPA Unusual Hazards:** None
- Unusual Fire and Explosion Hazards:** None
- Extinguishing Media:** Use proper extinguishing media for the surrounding fire and proper protective equipment, such as, full bunker gear and positive pressure self-contained breathing apparatus.

## 6. Accidental Release Measures

Avoid creating airborne dust. Maintain routine housecleaning procedures. Vacuum only with HEPA filtered equipment, if sweeping is necessary, use a dust suppressant and keep material in closed containers. Do not use compressed air for clean-up. Workers should wear gloves, goggles and approved respirator. Avoid clean-up procedures that could cause water pollution.

## 7. Handling and Storage

### Clean Up

Cleanup dust carefully. Use wet sweeping or high efficiency vacuum to remove dust. Do not use compressed air. During after-service removal activities, wet exposed material frequently to minimize airborne dust. A surfactant may be added to the water to improve the wetting process. Use only enough water to wet the insulation. Do not allow water to accumulate on floors.

### Empty Containers

Product packaging may contain residue. Do not reuse.

## 8. Other Information

Removal after service: Under sustained and steady high temperature over 1800°F, this material will possibly transform to crystalline silica (ciystobalite) in exposed portions. Prolonged or repeated exposure to respirable crystalline silica dust may lead to lung disease. IARC has listed crystalline silica in Category 2A a probable carcinogen ("crystalline silica inhaled in the form of quartz or cristobalite from occupational source is carcinogenic to humans" IARC monograph 68, June 1997 p 210-211). The permissible exposure limit(PEL) set by OSHA for respirable cristobalite is 0.05mg/m3.

# PTFE Coated Draw Cord



## Material Safety Data Sheet

### 1. Company & Product Information

Company Name:

UniTherm Insulation Systems

711 Jones Street

Lewisville, Texas 75057

p | 800.657.9542 f | 972.436.0112

Product:

PTFE Coated Draw Cord

### 2. Hazardous Identification

**Fibrous Glass:**

Composition consisting of oxides of silicon, aluminum, calcium, boron, and magnesium fused in an amorphous vitreous state.

**%: > 96.5**

**TLV: 10mg/m<sup>3</sup>**

**PEL: None Established  
(5mg/m<sup>3</sup> - respirable nuisance  
duct)**

**Surface Sizing:**

**%: >3.5**

**TLV: None Established**

**PEL: None Established**

### 3. Physical/Chemical Characteristics

**Melting Point:** 1472°F

**Boiling Point:** n/a

**Vapor Pressure (mm Hg):** n/a

**Vapor Density (Air=1):** n/a

**Specific Gravity (H<sub>2</sub>O=1):** 2.59

**Percent Volatile by Volume:** 0

**Evaporation Rate:** n/a

**Solubility in Water:** Insoluble

**Appearance and Odor:** A texturized product consisting of yellow-white to white fibers bound together in strands and manufactured into rope.

**Fiber Diameter:** Normally there are no fibers with diameters smaller than 4.7 microns.

## 4. Fire and Explosion Data

<b>Flash Point:</b>	Non-Burning
<b>Flammability Limits:</b>	n/a
<b>Extinguishing Media:</b>	n/a
<b>Special Fire Fighting Instructions:</b>	In a sustained fire, self contained breathing apparatus should be worn.
<b>Unusual Fire and Explosive Hazards:</b>	None known

## 5. Health Hazard Data

<b>Primary Routes of Entry:</b>	Inhalation
<b>Signs and Symptoms of Overexposure:</b>	Rash, Itching, and Conjunctivitis
<b>Health Hazards:</b>	Acute: Exposure to glass fibers sometimes causes irritation of the skin and, less frequently, irritation of the eyes, nose, or throat. Chronic: a number of epidemiology studies, done over many years, of workers employed for up to 40 years in the manufacture of fiberglass have shown no evidence of increases in either malignant or nonmalignant respiratory disease attributable to exposure to fiberglass. However, recent studies have shown slight increases in lung cancer among workers employed in the manufacture of glass wool and mineral wool fiberglass product. Animal inhalation studies for fiberglass have not shown evidence of either a carcinogenic or fibrogenic response. Studies using artificial implantation or injection of glass fibers into animals have resulted in cancer. However, since there are no natural mechanisms which would mimic such artificial exposures, those studies are not thought to be relevant to human exposure.
<b>Carcinogenicity:</b>	Continuous filament fiberglass has been designated to be IARC as Group 3, "not classifiable as to human carcinogenicity". This means the evidence is insufficient to link that fiber to cancer.
<b>Medical Conditions Aggravated by Exposure:</b>	n/a
<b>Emergency and First Aid Procedures:</b>	Eye Contact: Flush eyes with clear water for at least 15 minutes seek medical contact. Skin contact: Rinse contacted areas with room temperature to cool water, then wash gently with mild soap. If fiberglass becomes imbedded, seek medical attention.

## 6. Reactivity Data

<b>Stability:</b>	Stable
<b>Conditions to Avoid:</b>	None Known
<b>Incompatibility:</b>	None Known
<b>Hazardous Decompositions Products:</b>	In a sustained fire, binders may decompose releasing hazardous products of combustion.
<b>Hazardous Polymerization:</b>	Will not occur
<b>Conditions to Avoid:</b>	n/a

## 7. Spill or Leak Procedures

<b>Steps to be taken in case material is released or spilled:</b>	No special precautions
<b>Waste Disposal Method:</b>	Dispose of as solid in accordance with federal, state and local regulations. Not considered hazardous waste under federal "RCRA" regulations.

## 8. Special Protection Information

<b>Respiratory Protection:</b>	None normally required. If airborne fiberglass concentrations exceed permissible exposure levels, respiratory protection for nuisance dusts in accordance with OSHA 1910.134 should be provided.
<b>Ventilation:</b>	Use local exhaust ventilation if necessary to maintain airborne levels to below established limits.
<b>Protective Gloves:</b>	May reduce skin irritation in some operations.
<b>Eye Protection:</b>	Safety glasses with side shields.
<b>Other Protective Equipment:</b>	Use of long sleeved shirts, buttoned to fit loosely at the neck and wrist. Long pants and good personal hygiene will maximize comfort.

## 9. Special Precautions

<b>Precautions to be taken in handling and storage:</b>	None known
<b>Other Precautions:</b>	None known

## Material Safety Data Sheet

### 1. Company & Product Information

Company Name:

UniTherm Insulation Systems

711 Jones Street

Lewisville, Texas 75057

p | 800.657.9542 f | 972.436.0112

Product:

Teflon Coated Fiberglass Cloth

Teflon Cloth

FCF-1800

Various Colors

No Odor

### 2. Hazardous Ingredients

Fibrous Glass

ACGIH TLV

10 m/m3 of air for fiber diameters less than 7 microns

### 3. Hazard Health Data

This material is not known to be a carcinogen.

### 4. Physical Data

**Boiling Point:** n/a

**Melting Point:** >400°F

**Percentage Volatile:** n/a

**Solubility in Water:** Negligible

**Appearance:** Blue or Grey on both sides

**Specific Gravity (water-1):** 1.60

**Vapor Density:** n/a

**Vapor Pressure:** n/a

**Evaporation Rate:** n/a

**Odor:** No odor

### 5. Fire and Explosion Data

**Flash Point:** n/a

**Flammability Limits:** LEL: n/a UEL: n/a

**Auto Ignition Temp:** n/a

**Extinguishing Media:**

Carbon Dioxide, water, or dry chemical

**Special Fire Fighting Instructions:**

Wear self-contained breathing apparatus.

Material does not burn without an external source of fuel under normal conditions, will burn in an atmosphere containing an excess of 98% oxygen if an ignition source is present.

## 6. Reactivity / Stability Data

<b>Conditions to Avoid:</b>	Temperatures above 482°F
<b>Incompatibility:</b>	Strong oxidizing agents
<b>Decomposition / By-products:</b>	Hydrogen fluoride, carbon monoxide, carbon dioxide

## 7. First Aid Measures

<b>Inhalation:</b>	May inhale dust while cutting, move individual to fresh air, seek medical attention if irritation persists.
<b>Skin Contact:</b>	If skin becomes irritated, do not rub or scratch exposed skin. Wash with a mild soap and running water, use a washcloth to help remove fibers/dust. Change into clean clothing. If irritation persists seek medical attention.
<b>Eye Contact:</b>	Flush with running water for a least 15 minutes. Seek medical attention if irritation persists.
<b>Ingestion:</b>	n/a

## 8. Handling, Storage and Disposal

<b>Handling:</b>	Material is a solid, use adequate material handling equipment. Long sleeve clothing, cotton gloves and safety glasses or goggles.
<b>Storage:</b>	No special precautions needed.
<b>Disposal:</b>	Dispose of in accordance with federal, state and local regulations as a solid non-hazardous waste.

## 9. Exposure Control / Personal Protection

<b>Ventilation:</b>	General dilution ventilation and/or exhaust ventilation should be provided, as necessary to maintain exposures below PEL's or TLV's. Adequate ventilation must be provided at elevated temperatures.
<b>Eye Protection:</b>	Safety glasses, goggles or face shield should be worn whenever handling materials.
<b>Protective Clothing:</b>	Wear loose fitting, long sleeved shirt that covers the base of neck. Long pants are also recommended.
<b>Work/Hygienic Practices:</b>	Handle in accordance with good industrial hygiene and safety practices.

# Silicone Coated Fiberglass Cloth



## Material Safety Data Sheet

### 1. Company & Product Information

Company Name:

UniTherm Insulation Systems

711 Jones Street

Lewisville, Texas 75057

p | 800.657.9542 f | 972.436.0112

Product:

Silicone

3201-2-SS

Various Colors

No Odor

### 2. Hazardous Ingredients

Fibrous Glass

ACGIH TLV

10 m/m3 of air for fiber diameters less than 7 microns

### 3. Hazard Health Data

This material is not known to be a carcinogen.

### 4. Physical Data

**Boiling Point:** n/a

**Melting Point:** >1,000°F

**Percentage Volatile:** n/a

**Solubility in Water:** Negligible

**Appearance:** Silver/Black coated fabric

**Specific Gravity (water-1):** 1.24

**Vapor Density:** n/a

**Vapor Pressure:** n/a

**Evaporation Rate:** n/a

**Odor:** No odor

### 5. Fire and Explosion Data

**Flash Point:** > 482°F by TOC

**Flammability Limits:** LEL: n/a UEL: n/a

**Auto Ignition Temp:** n/a

**Extinguishing Media:**

Carbon Dioxide, water, or dry chemical

**Special Fire Fighting Instructions:**

Wear self-contained breathing apparatus.

Material does not burn without an external source of fuel under normal conditions.

## 6. Reactivity / Stability Data

<b>Conditions to Avoid:</b>	n/a
<b>Incompatibility:</b>	Strong oxidizing agents
<b>Decomposition / By-products:</b>	Hydrogen fluoride, carbon monoxide, carbon dioxide

## 7. First Aid Measures

<b>Inhalation:</b>	May inhale dust while cutting, move individual to fresh air, seek medical attention if irritation persists.
<b>Skin Contact:</b>	If skin becomes irritated, do not rub or scratch exposed skin. Wash with a mild soap and running water, use a washcloth to help remove fibers/dust. Change into clean clothing. If irritation persists seek medical attention.
<b>Eye Contact:</b>	Flush with running water for a least 15 minutes. Seek medical attention if irritation persists.
<b>Ingestion:</b>	n/a

## 8. Handling, Storage and Disposal

<b>Handling:</b>	Material is a solid, use adequate material handling equipment. Long sleeve clothing, cotton gloves and safety glasses or goggles.
<b>Storage:</b>	No special precautions needed.
<b>Disposal:</b>	Dispose of in accordance with federal, state and local regulations as a solid non-hazardous waste.



# Vermiculite Coated Fiberglass Cloth



## Material Safety Data Sheet

### 1. Company & Product Information

Company Name:  
UniTherm Insulation Systems  
711 Jones Street  
Lewisville, Texas 75057  
p | 800.657.9542 f | 972.436.0112

Product:  
Vertex  
Chemical Family:  
Fiberglass Textile, Yarn, Fabric, Tape,  
Braiding, and Rope

### 2. Osha Hazardous Substances

COMPONENT:	CAS NO:	ACGIH TLV: (8 - hr TWA)	OSHA PEL: (8 - hr TWA)
<b>Fiberglass:</b>	65997-17-3		
<b>Non respirable:</b>		5mg/m <sup>3</sup> Inhalable Fraction	5mg/m <sup>3</sup> , total dust
<b>Respirable:</b>		3mg/m <sup>3</sup> , PNOC	5mg/m <sup>3</sup> , respirable
<b>Respirable particulate with:</b>		NE	1 fiber/cc; aspect
<b>Fiber like dimensions:</b> (glass standards) < 0.002%			ratio > 5:1
<b>Size:</b>	Mixture	NE	NE
<b>Vermiculite:</b>			
<b>Non respirable:</b>		10mg/m <sup>3</sup>	10mg/m <sup>3</sup> , total dust
<b>Respirable:</b>		3mg/m <sup>3</sup>	5mg/m <sup>3</sup>

TWA - time weighted average, PNOR - particles not otherwise classified,  
NE - none established

### 3. Physical Data

<b>Boiling Point:</b> n/a	<b>Specific Gravity:</b> (water = 1) : 2.60
<b>Melting point:</b> n/a	<b>Vapor Density:</b> n/a
<b>Percent Volatile:</b> n/a	<b>Vapor Pressure:</b> n/a
<b>Solubility in Water:</b> Insoluble	<b>Evaporation Rate:</b> n/a
<b>APPEARANCE AND ODOR:</b>	Bronze or Blue, No Odor

### 4. Fire And Explosion Data

<b>Flash Point:</b> n/a	<b>Method Used:</b> n/a
<b>Auto Ignition Temp:</b> n/a	<b>Flammability Limits:</b> n/a
<b>Extinguishing Media:</b> Water, chemical foam, dry chemical, CO <sup>2</sup> , and/or smother.	
<b>Special Fire Fighting Instructions:</b> n/a	<b>Unusual Fire and Explosion Hazards:</b> n/a

### 5. Health Hazard Data

<b>Primary Routes of Exposure:</b>	Inhalation, skin, and eye
<b>Acute:</b>	Possible mechanical irritation accompanied by itching or dermatitis
<b>Chronic:</b>	None known

One of the health questions about textile glass fiber is whether or not it can cause cancer in people. The diameter of these continuous filament fibers make them too large to be inhaled into the lungs of people. No health authority has found, and no test has shown, that glass textile fibers cause cancer in people. As a result of these findings, the World Health Organization and other authorities bodies do not classify glass fiber as a carcinogen.

### 6. Emergency And First Aid Procedures

<b>Inhalation:</b>	If irritation develops move to fresh air.
<b>Skin Contact:</b>	If fibers irritate the skin wash with soap and water.
<b>Eye Contact:</b>	Flush eyes with water for 15 minutes or until fibers are removed.
<b>Ingestion:</b>	n/a

FOR ALL CONDITIONS SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS

## 7. Employee Protection

<b>Ventilation:</b>	General dilution and/or local exhaust ventilation should be provided as necessary to maintain exposures below occupational exposure limits.
<b>Eye Protection:</b>	Safety Glasses, goggles, or face shields, as necessary.
<b>Protective Clothing:</b>	Wear loose fitting long sleeve shirt and pants or other appropriate clothing to protect these areas where irritation is experience. Skin irritation is known to occur at pressure points such as round neck, wrist, waist, and fingers.
<b>Work and Hygienic Practices:</b>	<ul style="list-style-type: none"><li>• Remove dust and fiber from the skin after exposure. Be careful not to rub or scratch irritated areas which could force fibers into the skin. Fibers should be washed off.</li><li>• Use of barrier creams can, in some instances, can be helpful.</li><li>• Use vacuum equipment to remove fibers and dust from clothing. Wash contaminated clothing separately and wipe out washer/sink in order to prevent loose fibers and dust from contaminating other laundry.</li><li>• Use vacuum equipment to clean work surfaces.</li></ul>

## 8. Reactivity Data

<b>Stability:</b>	Product is stable.
<b>Incompatibility:</b>	None reasonably foreseeable.
<b>Hazardous Decomposition Products:</b>	CO, Co <sup>2</sup> . Other undetermined compounds could be released in small quantities.
<b>Hazardous Polymerization:</b>	Will not occur.

## 9. Storage Precautions

n/a

## 10. Environmental Protection

<b>Spills:</b>	n/a
<b>Waste Disposal:</b>	Dispose as solid non-hazardous waste, in accordance with federal, state, and local regulations.

## 11. Toxicological Information

The black, brown and gray colors of the product contain carbon black, which has been identified as a potential carcinogen. The IARC cites several animal studies where inhalation or intratracheal installation of carbon black using rats as the test species, showed an increased incidence of benign and malignant tumors of the lung. The carbon black is bound in a polymer matrix and is not expected to be bioavailable.

## 12. Ecological Information

Detailed studies on the environment fate of the product have not been conducted. The product is, however, not expected to present a hazard to aquatic and terrestrial flora and fauna.

### **13. Disposal Consideration**

As supplied, product is considered non-hazardous. It should be disposed of in an EPA approved landfill in accordance with all local, state, and federal regulations

### **14. Regulatory Information**

The white, gray, and tan colors of the product can contain up to 2.2% zinc compounds, which are reportable under Section 313 of the Superfund Amendments and Reauthorization Act of 1986.

OSHA Hazard Communication Categories: Irritant, Lung Hazard, Skin Hazard, and Carcinogen.

SARA Hazard Categories: Acute Hazard, Chronic hazard.

WHMIS Classification: Non - Hazardous.

All components of the product are included in the Toxic Substance Control Act.