1. PRODUCT AND COMPANY IDENTIFICATION

Company Identification

UniTherm International Inc.
711 Jones Street
Lewisville, Texas 75057

EMERGENCY TELEPHONE NUMBER:
For emergency involving spill, leak, fire, exposure, or accident call CHEMTREC (800) 424-9300, day or night

Product Identification

Product Name: IceRock
Common Name(s): Mineral Wool

2. HAZARDS IDENTIFICATION

GHS Classification

Carcinogenicity: Category 2

Label Elements

Signal word: Warning

Hazard statements: Suspected of causing cancer.

Precautionary statements:

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.

Response:
IF exposed or concerned: Get medical advice/ attention.

Storage:
Store locked up.

Disposal:
Dispose of contents/ container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Mineral Fiber Product

HAZARDOUS COMPONENTS

Chemical Name	CAS-No.	Concentration (%)
Mineral wool fibres	65997-17-3	>= 50 - < 70 %
non-durable glass wool fiber		>= 5 - < 10 %

4. FIRST AID MEASURES

Inhalation: If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

Eye Contact: Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.

Ingestion: Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

Protection of first-aiders: Do not leave the victim unattended.

5. FIRE FIGHTING MEASURES

Hazardous combustion products: No hazardous combustion products are known

Specific extinguishing methods: Standard procedure for chemical fires.

Special protective equipment for firefighters: Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Avoid dust formation.

Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Advice on safe handling: For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.

Conditions for safe storage: Keep in a dry, cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis Update
Mineral wool fibres	65997-17-3	TWA	1 fibre/cm3	ACGIH (2010-03-01)
non-durable glass wool fiber	65997-17-3	TWA	1 fibre/cm3	ACGIH (2010-03-01)

*Any OSHA PELs with Issue Date 1989: Vacated by court of appeals in 1992.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory protection: No personal respiratory protective equipment normally required.

Hand protection
Remarks: For prolonged or repeated contact use protective gloves.

Eye protection: Safety glasses

Skin and body protection: If used and stored as directed, no special protective equipment is necessary.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Written instructions for handling must be available at the work place.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: fibres
Color: brown
Odor: odorless
Odor Threshold: no data available
pH: not applicable
Melting point/freezing point: > 1,150 °C
Boiling point/boiling range: not applicable
Flash point: not applicable
Evaporation rate: not applicable
Flammability (solid, gas): no data available
Upper explosion limit: not applicable
Lower explosion limit: not applicable
Vapor pressure: not applicable
Relative vapor density: not applicable
Relative density: no data available

Solubility(ies)
Water solubility: insoluble
Solubility in other solvents: no data available
Partition coefficient: n-octanol/water: no data available
Auto-ignition temperature: no data available
Thermal decomposition: no data available

Viscosity
Viscosity, dynamic: no data available
Viscosity, kinematic: no data available

10. STABILITY AND REACTIVITY

Reactivity: No decomposition if stored and applied as directed.

Chemical stability: Formaldehyde may be released by partial hydrolysis of the urea formaldehyde polymer, especially in high temperature applications or

Possibility of hazardous reactions: Stable under recommended storage conditions. No hazards to be specially mentioned.

Conditions to avoid: no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Product

Acute oral toxicity: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Skin corrosion/irritation: no data available
Serious eye damage/eye irritation: no data available
Respiratory or skin sensitization: no data available
Germ cell mutagenicity: no data available

Carcinogenicity

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is maintained in the OSHA Hazard Communication standard (29 CFR 1910.1200) and sections 1910.1001-1052.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity: no data available
STOT - single exposure: no data available
STOT - repeated exposure: no data available
Aspiration toxicity: no data available

Further information
Product

no data available

12. ECOLOGICAL INFORMATION

Ecotoxicity: no data available
Persistence and degradability: no data available
Bioaccumulative potential: no data available
Mobility in soil: no data available
Results of PBT and vPvB assessment: no data available
Other adverse effects

Product:

Additional ecological information: no data available

13. DISPOSAL CONSIDERATIONS

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Packaging that cannot be reused after cleaning must be disposed or recycled in accordance with all federal, national and local regulations.

14. TRANSPORT INFORMATION

International transport regulations

15. REGULATORY INFORMATION

OSHA Hazards: Carcinogen

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Formaldehyde	50-00-0	100	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Formaldehyde	50-00-0	100	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 302: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US STATE REGULATIONS

Massachusetts Right To Know

formaldehyde	50-00-0	0 - 0.1 %

Pennsylvania Right To Know

Mineral wool fibres	65997-17-3	50 - 70 %
Urea, polymer with formaldehyde	9011-05-6	10 - 20 %
non-durable glass wool fiber	65997-17-3	5 - 10 %
formaldehyde	50-00-0	0 - 0.1 %

New Jersey Right To Know

Mineral wool fibres	65997-17-3	50 - 70 %
Urea, polymer with formaldehyde	9011-05-6	10 - 20 %
non-durable glass wool fiber	65997-17-3	5 - 10 %

California Prop 65 WARNING! This product contains a chemical known to the State of California to cause cancer.

Mineral wool fibres	65997-17-3
formaldehyde	50-00-0

The components of this product are reported in the following inventories:

TSCA	On TSCA Inventory
DSL	All components of this product are on the Canadian DSL.

16. OTHER INFORMATION

Disclaimer:

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Individuals should make a determination as to the suitability of the information for their particular purpose(s).

1. PRODUCT AND COMPANY IDENTIFICATION

Company Identification

UniTherm International Inc.
711 Jones Street
Lewisville, Texas 75057

EMERGENCY TELEPHONE NUMBER:
For emergency involving spill, leak, fire, exposure, or accident call CHEMTREC (800) 424-9300, day or night

Product Identification

Product Name: Black Nomex Thread
Common Name(s): Nomex Aramid Fire Retardant Thread, Nomex Sewing Thread

2. HAZARDS IDENTIFICATION

Emergency Overview

The hazards of this product are associated mainly with its processing. Dust may form explosive mixture in air. High concentrations of dust can irritate eyes, nose and respiratory system and cause coughing and sneezing. Processing meta-aramid products can release Dimethyl Acetamide (DMAC). Hazards related to DMAC include: May be harmful by inhalation (after often repeated exposure). May be harmful in contact with skin (after often repeated exposure). Liver and kidney injuries may occur. Processing para-aramid products can release respirable dust and respirable fibre particulate. Prolonged inhalation of respirable dust and respirable fibre particulate at high concentrations can cause lung damage. Continual rubbing of fibre particulates and dust on the skin can cause a transitory, mild irritation with redness or itching.

Potential Health Effects

Carcinogenicity

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Meta-aramid fiber or meta-aramid fiber blended with para-aramid, antistatic or other synthetic fibers		100 %

Exposure limits may be applicable for the following:

Meta-aramid	25765-47-3
Para-aramid	26125-61-1
Synthetic fibres	
N,N-Dimethylacetamide	127-19-5

4. FIRST AID MEASURES

General advice: No hazards, which require special first aid measures. If symptoms persist, call a physician. If irritation occurs, flush area thoroughly with water.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash point: not applicable
Thermal decomposition: > 300 °C (> 572 °F)

Fire and Explosion Hazard: Hazardous decomposition products formed under fire conditions.

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Firefighting Instructions: Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel): None.

Spill Cleanup: Avoid dust formation. Clean up dusts and fibres with high efficiency particulate air (HEPA) filtered vacuum equipment, or by wet cleaning.

Accidental Release Measures: Do not let product enter drains.

7. HANDLING AND STORAGE

Handling (Personnel): Avoid dust formation. Do not touch moving threadlines. Entanglement with this fibre can severely cut or even sever fingers. Avoid breathing dust or vapor.

Storage: Keep away from direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: Ensure adequate ventilation. Recirculated air should be filtered to remove respirable dust. Provide for appropriate exhaust ventilation and dust collection at machinery. Static charges can cause explosions in solvent and dust laden atmospheres.

Provide grounding of equipment to prevent static build-up.

Personal protective equipment

Eye protection: Safety glasses with side-shields

Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Exposure Guidelines

Exposure Limit Values

Meta-aramid

AEL *	(DUPONT)	10 mg/m3	8 hr.	TWA	Total dust.
AEL *	(DUPONT)	5 mg/m3	8 hr.	TWA	Respirable dust.

Para-aramid

AEL *	(DUPONT)	2 fibers/cm3	8 & 12 hr.	TWA	Respirable fibers.
AEL *	(DUPONT)	5 mg/m3	8 & 12 hr.	TWA	Non-fibrous particulate and/or nonrespirable fibres.

N,N-Dimethylacetamide

PEL	(OSHA)	10 ppm Skin designation applies.	35 mg/m3 Skin designation applies.	8 hr.	TWA
TLV	(ACGIH)	10 ppm			TWA
AEL *	(DUPONT)	10 ppm	8 & 12 hr	TWA	Skin

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits, which are lower than, the AEL are in effect, such limits shall take precedence.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: Nonwoven fabric, woven fabric, fibres, yarn
Color: Black, pigmented
Odor: None
Melting point/range: N/A
Specific Gravity: 1.38
Water solubility: Insoluble

10. STABILITY AND REACTIVITY

Conditions to avoid: Temperature > 200 °C (> 392 °F).
Heating can release hazardous gases.

Incompatibility: Strong acids and strong bases

Decomposition: **Decomposition temperature:** > 300 °C (> 572 °F).
Hazardous decomposition products Carbon monoxide, nitrogen oxides (NOx), Hydrogen cyanide (hydrocyanic acid).

11. TOXICOLOGICAL INFORMATION

Skin sensitization: Did not cause sensitization on laboratory animals.
Negative in human patch test.

Meta-aramid

Oral ALD:	> 11,000 mg/kg, rat
Inhalation ALC:	> 238 mg/m3, rat lung effects
Skin irritation:	non-irritant
Carcinogenicity:	Did not show carcinogenic effects in animal experiments.

Para-aramid

Oral ALD:	> 7,500 mg/kg, rat
Skin irritation:	Species: rabbit, No skin irritation non-irritant
Eye irritation:	non-irritant
Repeated dose toxicity:	Inhalation, rat lung effects
Carcinogenicity:	Animal testing did not show any carcinogenic effects.
Mutagenicity:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

N,N-Dimethylacetamide

Dermal LD50:	2,240 - 9,600 mg/kg, animals (unspecified species)
Oral LD50:	3,000 - 6,000 mg/kg, rat
Inhalation 1 h LC50:	8.81 mg/l female, rat Value applicable only if respirable particles are formed.
Inhalation 4 h LC50:	2.2 mg/l female, rat
Skin irritation:	Species: rabbit Mild skin irritation
Eye irritation:	Species: rabbit irritant

Repeated dose toxicity:	**Dermal** Central nervous system depression, Liver effects, Skin effects **Oral** Pathologic changes, Stomach, Testes, Liver, Kidney, Abnormal decrease in number of red blood cells (anaemia) **Inhalation** Kidney effects, Liver effects, Retinal damage
Carcinogenicity:	Did not show carcinogenic effects in animal experiments.
Mutagenicity:	Did not cause genetic damage in cultured bacterial cells. Did not cause genetic damage in cultured mammalian cells. Evidence suggests this substance does not cause genetic damage in animals.
Toxicity to reproduction:	Animal testing showed no reproductive toxicity.
Teratogenicity:	Animal testing showed effects on embryo-foetal development at levels equal to or above those causing maternal toxicity.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity

Para-aramid: This product has no known eco-toxicological effects.

N,N-Dimethylacetamide 96 h LC50: Fathead minnow 1,500 mg/l

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Can be landfilled or incinerated, when in compliance with local regulations. Do not flush into surface water or sanitary sewer system.

14. TRANSPORT INFORMATION

None special required.

15. REGULATORY INFORMATION

TSCA Status: Product is an article as defined at 40CFR720.3(c) and is not subject to TSCA Inventory requirements.

SARA 313 Regulated Chemical(s): SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65: Chemicals known to State of California to cause cancer, birth defects or any other harm: none known

16. OTHER INFORMATION

Disclaimer:

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Individuals should make a determination as to the suitability of the information for their particular purpose(s).

1. PRODUCT AND COMPANY IDENTIFICATION

Company Identification

UniTherm International Inc.
711 Jones Street
Lewisville, Texas 75057

EMERGENCY TELEPHONE NUMBER:
For emergency involving spill, leak, fire, exposure, or accident call CHEMTREC (800) 424-9300, day or night

Product Identification

Product Name: White Nomex Thread
Common Name(s): Nomex Aramid Fire Retardant Thread, Nomex Sewing Thread

2. HAZARDS IDENTIFICATION

Emergency Overview

The hazards of this product are associated mainly with its processing. Dust may form explosive mixture in air. High concentrations of dust can irritate eyes, nose and respiratory system and cause coughing and sneezing. Processing meta-aramid products can release Dimethyl Acetamide (DMAC). Hazards related to DMAC include: May be harmful by inhalation (after often repeated exposure). May be harmful in contact with skin (after often repeated exposure). Liver and kidney injuries may occur. Processing para-aramid products can release respirable dust and respirable fibre particulate. Prolonged inhalation of respirable dust and respirable fibre particulate at high concentrations can cause lung damage. Continual rubbing of fibre particulates and dust on the skin can cause a transitory, mild irritation with redness or itching.

Potential Health Effects

Carcinogenicity

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Meta-aramid fiber or meta-aramid fiber blended with para-aramid, antistatic or other synthetic fibers		100 %

Exposure limits may be applicable for the following:

Meta-aramid	25765-47-3
Para-aramid	26125-61-1
Synthetic fibres	
N,N-Dimethylacetamide	127-19-5

4. FIRST AID MEASURES

General advice: No hazards, which require special first aid measures. If symptoms persist, call a physician. If irritation occurs, flush area thoroughly with water.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash point: not applicable
Thermal decomposition: > 300 °C (> 572 °F)

Fire and Explosion Hazard: Hazardous decomposition products formed under fire conditions.

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Firefighting Instructions: Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel): None.

Spill Cleanup: Avoid dust formation. Clean up dusts and fibres with high efficiency particulate air (HEPA) filtered vacuum equipment, or by wet cleaning.

Accidental Release Measures: Do not let product enter drains.

7. HANDLING AND STORAGE

Handling (Personnel): Avoid dust formation. Do not touch moving threadlines. Entanglement with this fibre can severely cut or even sever fingers. Avoid breathing dust or vapor.

Storage: Keep away from direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: Ensure adequate ventilation. Recirculated air should be filtered to remove respirable dust. Provide for appropriate exhaust ventilation and dust collection at machinery. Static charges can cause explosions in solvent and dust laden atmospheres.

Provide grounding of equipment to prevent static build-up.

Personal protective equipment

Eye protection: Safety glasses with side-shields

Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Exposure Guidelines

Exposure Limit Values

Meta-aramid

AEL *	(DUPONT)	10 mg/m3	8 hr.	TWA	Total dust.
AEL *	(DUPONT)	5 mg/m3	8 hr.	TWA	Respirable dust.

Para-aramid

AEL *	(DUPONT)	2 fibers/cm3	8 & 12 hr.	TWA	Respirable fibers.
AEL *	(DUPONT)	5 mg/m3	8 & 12 hr.	TWA	Non-fibrous particulate and/or nonrespirable fibres.

N,N-Dimethylacetamide

PEL	(OSHA)	10 ppm Skin designation applies.	35 mg/m3 Skin designation applies.	8 hr.	TWA
TLV	(ACGIH)	10 ppm			TWA
AEL *	(DUPONT)	10 ppm	8 & 12 hr	TWA	Skin

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits, which are lower than, the AEL are in effect, such limits shall take precedence.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: Nonwoven fabric, woven fabric, fibres, yarn
Color: White, pigmented
Odor: None
Melting point/range: N/A
Specific Gravity: 1.38
Water solubility: Insoluble

10. STABILITY AND REACTIVITY

Conditions to avoid: Temperature > 200 °C (> 392 °F).
Heating can release hazardous gases.

Incompatibility: Strong acids and strong bases

Decomposition: **Decomposition temperature:** > 300 °C (> 572 °F).
Hazardous decomposition products Carbon monoxide, nitrogen oxides (NOx), Hydrogen cyanide (hydrocyanic acid).

11. TOXICOLOGICAL INFORMATION

Skin sensitization: Did not cause sensitization on laboratory animals.
Negative in human patch test.

Meta-aramid

Oral ALD:	> 11,000 mg/kg, rat
Inhalation ALC:	> 238 mg/m3, rat lung effects
Skin irritation:	non-irritant
Carcinogenicity:	Did not show carcinogenic effects in animal experiments.

Para-aramid

Oral ALD:	> 7,500 mg/kg, rat
Skin irritation:	Species: rabbit, No skin irritation non-irritant
Eye irritation:	non-irritant
Repeated dose toxicity:	Inhalation, rat lung effects
Carcinogenicity:	Animal testing did not show any carcinogenic effects.
Mutagenicity:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

N,N-Dimethylacetamide

Dermal LD50:	2,240 - 9,600 mg/kg, animals (unspecified species)
Oral LD50:	3,000 - 6,000 mg/kg, rat
Inhalation 1 h LC50:	8.81 mg/l female, rat Value applicable only if respirable particles are formed.
Inhalation 4 h LC50:	2.2 mg/l female, rat
Skin irritation:	Species: rabbit Mild skin irritation
Eye irritation:	Species: rabbit irritant

Repeated dose toxicity:	**Dermal** Central nervous system depression, Liver effects, Skin effects **Oral** Pathologic changes, Stomach, Testes, Liver, Kidney, Abnormal decrease in number of red blood cells (anaemia) **Inhalation** Kidney effects, Liver effects, Retinal damage
Carcinogenicity:	Did not show carcinogenic effects in animal experiments.
Mutagenicity:	Did not cause genetic damage in cultured bacterial cells. Did not cause genetic damage in cultured mammalian cells. Evidence suggests this substance does not cause genetic damage in animals.
Toxicity to reproduction:	Animal testing showed no reproductive toxicity.
Teratogenicity:	Animal testing showed effects on embryo-foetal development at levels equal to or above those causing maternal toxicity.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity

Para-aramid: This product has no known eco-toxicological effects.

N,N-Dimethylacetamide 96 h LC50: Fathead minnow 1,500 mg/l

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Can be landfilled or incinerated, when in compliance with local regulations. Do not flush into surface water or sanitary sewer system.

14. TRANSPORT INFORMATION

None special required.

15. REGULATORY INFORMATION

TSCA Status: Product is an article as defined at 40CFR720.3(c) and is not subject to TSCA Inventory requirements.

SARA 313 Regulated Chemical(s): SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65: Chemicals known to State of California to cause cancer, birth defects or any other harm: none known

16. OTHER INFORMATION

Disclaimer:

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Individuals should make a determination as to the suitability of the information for their particular purpose(s).

1. PRODUCT AND COMPANY IDENTIFICATION

Company Identification

UniTherm International Inc.
711 Jones Street
Lewisville, Texas 75057

EMERGENCY TELEPHONE NUMBER:
For emergency involving spill, leak, fire, exposure, or accident call CHEMTREC (800) 424-9300, day or night

Product Identification

Product Name: Yellow Nomex Thread
Common Name(s): Nomex Aramid Fire Retardant Thread, Nomex Sewing Thread

2. HAZARDS IDENTIFICATION

Emergency Overview

The hazards of this product are associated mainly with its processing. Dust may form explosive mixture in air. High concentrations of dust can irritate eyes, nose and respiratory system and cause coughing and sneezing. Processing meta-aramid products can release Dimethyl Acetamide (DMAC). Hazards related to DMAC include: May be harmful by inhalation (after often repeated exposure). May be harmful in contact with skin (after often repeated exposure). Liver and kidney injuries may occur. Processing para-aramid products can release respirable dust and respirable fibre particulate. Prolonged inhalation of respirable dust and respirable fibre particulate at high concentrations can cause lung damage. Continual rubbing of fibre particulates and dust on the skin can cause a transitory, mild irritation with redness or itching.

Potential Health Effects

Carcinogenicity

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Meta-aramid fiber or meta-aramid fiber blended with para-aramid, antistatic or other synthetic fibers		100 %

Exposure limits may be applicable for the following:

Meta-aramid	25765-47-3
Para-aramid	26125-61-1
Synthetic fibres	
N,N-Dimethylacetamide	127-19-5

4. FIRST AID MEASURES

General advice: No hazards, which require special first aid measures. If symptoms persist, call a physician. If irritation occurs, flush area thoroughly with water.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash point: not applicable
Thermal decomposition: > 300 °C (> 572 °F)

Fire and Explosion Hazard: Hazardous decomposition products formed under fire conditions.

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Firefighting Instructions: Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel): None.

Spill Cleanup: Avoid dust formation. Clean up dusts and fibres with high efficiency particulate air (HEPA) filtered vacuum equipment, or by wet cleaning.

Accidental Release Measures: Do not let product enter drains.

7. HANDLING AND STORAGE

Handling (Personnel): Avoid dust formation. Do not touch moving threadlines. Entanglement with this fibre can severely cut or even sever fingers. Avoid breathing dust or vapor.

Storage: Keep away from direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: Ensure adequate ventilation. Recirculated air should be filtered to remove respirable dust. Provide for appropriate exhaust ventilation and dust collection at machinery. Static charges can cause explosions in solvent and dust laden atmospheres.

Provide grounding of equipment to prevent static build-up.

Personal protective equipment

Eye protection: Safety glasses with side-shields

Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Exposure Guidelines

Exposure Limit Values

Meta-aramid

AEL *	(DUPONT)	10 mg/m3	8 hr.	TWA	Total dust.
AEL *	(DUPONT)	5 mg/m3	8 hr.	TWA	Respirable dust.

Para-aramid

AEL *	(DUPONT)	2 fibers/cm3	8 & 12 hr.	TWA	Respirable fibers.
AEL *	(DUPONT)	5 mg/m3	8 & 12 hr.	TWA	Non-fibrous particulate and/or nonrespirable fibres.

N,N-Dimethylacetamide

PEL	(OSHA)	10 ppm Skin designation applies.	35 mg/m3 Skin designation applies.	8 hr.	TWA
TLV	(ACGIH)	10 ppm			TWA
AEL *	(DUPONT)	10 ppm	8 & 12 hr		TWA Skin

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits, which are lower than, the AEL are in effect, such limits shall take precedence.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: Nonwoven fabric, woven fabric, fibres, yarn
Color: Yellow, pigmented
Odor: None
Melting point/range: N/A
Specific Gravity: 1.38
Water solubility: Insoluble

10. STABILITY AND REACTIVITY

Conditions to avoid: Temperature > 200 °C (> 392 °F).
Heating can release hazardous gases.

Incompatibility: Strong acids and strong bases

Decomposition: **Decomposition temperature:** > 300 °C (> 572 °F).
Hazardous decomposition products Carbon monoxide, nitrogen oxides (NOx), Hydrogen cyanide (hydrocyanic acid).

11. TOXICOLOGICAL INFORMATION

Skin sensitization: Did not cause sensitization on laboratory animals.
Negative in human patch test.

Meta-aramid

Oral ALD:	> 11,000 mg/kg, rat
Inhalation ALC:	> 238 mg/m3, rat lung effects
Skin irritation:	non-irritant
Carcinogenicity:	Did not show carcinogenic effects in animal experiments.

Para-aramid

Oral ALD:	> 7,500 mg/kg, rat
Skin irritation:	Species: rabbit, No skin irritation non-irritant
Eye irritation:	non-irritant
Repeated dose toxicity:	Inhalation, rat lung effects
Carcinogenicity:	Animal testing did not show any carcinogenic effects.
Mutagenicity:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

N,N-Dimethylacetamide

Dermal LD50:	2,240 - 9,600 mg/kg, animals (unspecified species)
Oral LD50:	3,000 - 6,000 mg/kg, rat
Inhalation 1 h LC50:	8.81 mg/l female, rat Value applicable only if respirable particles are formed.
Inhalation 4 h LC50:	2.2 mg/l female, rat
Skin irritation:	Species: rabbit Mild skin irritation
Eye irritation:	Species: rabbit irritant

Repeated dose toxicity:	**Dermal** Central nervous system depression, Liver effects, Skin effects **Oral** Pathologic changes, Stomach, Testes, Liver, Kidney, Abnormal decrease in number of red blood cells (anaemia) **Inhalation** Kidney effects, Liver effects, Retinal damage
Carcinogenicity:	Did not show carcinogenic effects in animal experiments.
Mutagenicity:	Did not cause genetic damage in cultured bacterial cells. Did not cause genetic damage in cultured mammalian cells. Evidence suggests this substance does not cause genetic damage in animals.
Toxicity to reproduction:	Animal testing showed no reproductive toxicity.
Teratogenicity:	Animal testing showed effects on embryo-foetal development at levels equal to or above those causing maternal toxicity.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity

Para-aramid: This product has no known eco-toxicological effects.

N,N-Dimethylacetamide 96 h LC50: Fathead minnow 1,500 mg/l

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Can be landfilled or incinerated, when in compliance with local regulations. Do not flush into surface water or sanitary sewer system.

14. TRANSPORT INFORMATION

None special required.

15. REGULATORY INFORMATION

TSCA Status: Product is an article as defined at 40CFR720.3(c) and is not subject to TSCA Inventory requirements.

SARA 313 Regulated Chemical(s): SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65: Chemicals known to State of California to cause cancer, birth defects or any other harm: none known

16. OTHER INFORMATION

Disclaimer:

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UNITHERM international inc.

PTFE Coated Fiberglass Draw Cord

MSDS Number: ROP-02-SP
Revision Date: 5-25-16

Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Company Identification

UniTherm International Inc.
711 Jones Street
Lewisville, Texas 75057

EMERGENCY TELEPHONE NUMBER:
For emergency involving spill, leak, fire, exposure, or accident call CHEMTREC (800) 424-9300, day or night

Product Identification

Product Name: PTFE Coated Fiberglass Draw Cord
Common Name(s): PTFE Coated Glass Draw Cord

2. HAZARDS IDENTIFICATION

Hazard Classification: NA
Signal Word: N/A
Hazard Statement: N/A
Pictograms: N/A
Precautionary Statement: Inhalation of the thermal decomposition products, arising from high temperature or fire, is hazardous to health. Contamination of tobacco products must be avoided.

Potential Hazards:

Skin: Cutting or abrading material may produce small amounts of glass fiber particulates, which may cause skin irritation.

Eyes: Not a likely route of entry.

Inhalation: Inhalation of fumes from burning or heating above 300 C can cause polymer fume fever.

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	CAS #	Weight %
Polytetrafluoroethylene (PTFE)	9002-84-0	10-20%
Glass fiber	65997-17-3	80-90%
Various High Temperature Pigment		0– 3%

4. FIRST AID MEASURES

Skin: Not normally considered hazardous, if irritation occurs wash thoroughly with soap and water, if irritation persists consult a physician.

Eyes: Not normally considered hazardous, if irritation occurs flush with water, if irritation persists consult a physician.

Inhalation: N/A for material as supplied at room temperature and used as intended. Processing at high temperature may generate fumes, which can cause flu-like symptoms. Remove to fresh air, consult physician if severe.

Ingestion: If swallowed consult a physician. Do not induce vomiting unless instructed to do so by a physician.

Most Important Symptoms and Effects: Polymer Flu Fever. Inhalation of the thermal decomposition products, arising from high temperature or fire will cause flu like symptoms. Symptoms may be delayed several hours.

5. FIRE FIGHTING MEASURES

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

Specific Hazards During Fire-Fighting: Material is incombustible but if other fuel is present decomposition products will burn at about 1250F, producing toxic and corrosive gaseous products.

Special Protective Equipment: Wear self-contained breathing apparatus and protective suit. Wear neoprene gloves during cleaning up work after a fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: N/A Solid material
Environmental Precautions: N/A Solid Material
Methods & Materials for Cleanup: Collect with hands, broom, shovel, and/or vacuum.

7. HANDLING AND STORAGE

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: NA

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:

Ingredient Name	ACGIH TLV mg/m3	OSHA PEL mg/m3
Polytetrafluoroethylene (PNOC)		
Particulates Not Otherwise Classified	15 (total dust)	10 (inhalable fraction)
	5 (respirable fraction)	3 (respirable fraction)
Fibrous glass dust	15 (total dust)	5 (inhalable fraction)
	5 (respirable dust)	3 (PNOC)

Hygiene Measures: Wash hands immediately after handling, do not contaminate tobacco products.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Braided cord of various colors
Upper / Lower Flammability or Explosive Limits: N/A
Odor: None
Vapor Pressure: N/A
Odor Threshold: N/A
Vapor Density: N/A
pH: N/A
Relative Density: N/A
Melting Point / Freezing Point: N/A
Solubility: Insoluble
Initial Boiling Point & Boiling Range: N/A
Flash Point: N/A
Evaporation Rate: N/A
Decomposition Temperature: 300 C
Viscosity: N/A

10. STABILITY AND REACTIVITY

Reactivity: Stable at normal ambient temperature and pressure

Chemical Stability: Stable

Incompatibilities: Strong oxidizers, acids, and bases.

Hazardous Decomposition Products: Thermal decomposition may produce toxic and corrosive gaseous products.

Hazardous Polymerizations: Hazardous polymerization will not occur

11. TOXICOLOGICAL INFORMATION

Immediate (acute) Effects: No acute effects have been identified.
Delayed Effects: No delayed or chronic effects have been identified.
Other Data: NA

12. ECOLOGICAL INFORMATION

N/A

13. DISPOSAL CONSIDERATIONS

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 a high-temperature incinerator designed to burn fluoride-containing materials. Processing, use or contamination may make this information inaccurate or incomplete.

14. TRANSPORT INFORMATION

US DOT Hazard Class: NA
US DOT ID Number: NA

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:	none
	Sec. 302:	none

16. OTHER INFORMATION

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UNITHERM international inc.

PTFE Coated Fiberglass Sewing Thread
Safety Data Sheet

MSDS Number: THRD-09-SP
Revision Date: 5-25-16

1. PRODUCT AND COMPANY IDENTIFICATION

Company Identification

UniTherm International Inc.
711 Jones Street
Lewisville, Texas 75057

EMERGENCY TELEPHONE NUMBER:
For emergency involving spill, leak, fire, exposure, or accident call CHEMTREC (800) 424-9300, day or night

Product Identification

Product Name: PTFE Coated Fiberglass Sewing Thread
Common Name(s): PTFE Coated Sewing Thread

2. HAZARDS IDENTIFICATION

Route of Entry: This material may enter the body through inhalation of nuisance dust.
Target Organs: Respiratory system
Inhalation: Sore, raspy throat
Skin Contact: Redness and possible rash; itching
Eye Contact: Itching and redness
Ingestion: N/A

NFPA: Health = 1, Fire = 0, Reactivity = 0

HMIS III: H1/F0/PH0

GHS Signal Word:
WARNING

GHS Classifications:
Health, Respiratory or skin sensitization, 1 Skin

GHS Phrases:
H317 - May cause an allergic skin reaction

GHS Precautionary Statements:
P264 - Wash _ thoroughly after handling.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Fibrous Glass (CAS 65997-17-3)
Exposure Limits: OSHA PEL 15 mg/m3 (total), 5 mg/m3 (respirable). ACGIH TLV 1 f/cc

Polytetrafluoroethylene (CAS 9002-84-0)

4. FIRST AID MEASURES

Inhalation: Remove person to fresh air. If condition persists, seek medical attention.

Skin Contact: Rinse with copious quantities of cool water. If rash or itching persists, seek medical attention.

Eye Contact: Rinse with water. Do not rub eyes. Seek medical attention.

Ingestion: Not applicable.

5. FIRE FIGHTING MEASURES

Flash Point (Method Used): >250 °C by TOC Flammable Limits

LEL: N/A **UEL:** N/A

Extinguishing Media: Water, carbon dioxide, or dry chemical

Special Fire Fighting Procedures: Thermal decomposition of fiber coating may produce an irritating mixture of smoke and fumes.

Unusual Fire and Explosion Hazards: None

6. ACCIDENTAL RELEASE MEASURES

Material is a solid in roll form. If accidently released, rewind material back onto roll.

7. HANDLING AND STORAGE

Handling Precautions: Use adequate material handling equipment.

Storage Requirements: Store in dry place. Use may be at temperature extremes based on product data, but storage should be at ambient temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Local exhaust; dust collection
Personal Protective Equip: HMIS PP, A | Safety Glasses
Safety glasses; cotton gloves; long sleeve clothing

Wash thoroughly with soap and water after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Tan Thread
Physical State: Solid

Spec Grav. /Density: 2.1
Boiling Point: N/A
Vapor Pressure: N/A
pH: N/A
Odor: No Odor
Solubility: Negligible
Freezing/Melting Pt.: > 1000 F
Vapor Density: N/A

10. STABILITY AND REACTIVITY

Stability: Material is stable.
Conditions to Avoid: None known.
Materials to Avoid: Strong-oxidizing agents.
Hazardous Decomposition: Carbon monoxide; carbon dioxide; hydrogen fluoride
Hazardous Polymerization: Will Not Occur.

11. TOXICOLOGICAL INFORMATION

Direct contact with fiberglass materials or exposure to airborne fiberglass dust may irritate the skin, eyes, nose and throat. Fiberglass can cause itching due to mechanical irritation from the fibers. This is not an allergic reaction to the material. Breathing fibers may irritate the airways resulting in coughing and a scratchy throat. Some people are sensitive to the fibers, while others are not.

12. ECOLOGICAL INFORMATION

No known hazards except for airborne fibers caused by nuisance dust. 10 milligrams per cubic meter for fiber diameters less than 7 microns.

13. DISPOSAL CONSIDERATIONS

Incineration preferred in a federal, state, or local approved facility.

14. TRANSPORT INFORMATION

None special required.

15. REGULATORY INFORMATION

COMPONENT / (CAS/PERC) / CODES
*Polytetrafluoroethylene (9002840 n/a%) PA, TSCA

PA = PA Right-To-Know List of Hazardous Substances
TSCA = Toxic Substances Control Act

16. OTHER INFORMATION

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UNITHERM international inc.

PTFE Heating Cable

MSDS Number: HE&C-080910-SP
Revision Date: 5-25-16

Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Company Identification

UniTherm International Inc.
711 Jones Street
Lewisville, Texas 75057

EMERGENCY TELEPHONE NUMBER:
For emergency involving spill, leak, fire, exposure, or accident call CHEMTREC (800) 424-9300, day or night

Product Identification

Product Name: PTFE Heating Cable
Common Name(s):

2. HAZARDS IDENTIFICATION

Invasion Method: /

Health Hazard: 1) This product is nontoxic. But it produce pyrolysis gas at high temperature which can cause poisoning. The poisoning symptoms are like: short of breath, fever, cough, cyanosis and tremble, they are temporary and similar to getting a cold. 2)If the cables overload long time when working, it may appear leakage and short circuit problems, etc.

The simple of high-temperature pyrolysis gas will appear in two hours and will last 36-48 hours. There is no related articles report how continuous or cumulative inhalation will effect.

Environmental Hazard: /
Combustion Hazard: noncombustible

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure[ ] **Mixed**[√]

Chemicals Name: Teflon Twin Conductor Heating Cable

Injurious Ingredient	Content	CAS No
/	100% (qualified product)	25067-11-2

4. FIRST AID MEASURES

Skin Contact: if the skin touches the hot resin melt of cable surface, immediately use cold water to wash the skin and go hospital. If there is electric leakage when cable works, Turn off the power immediately and take emergency treatments according to the situation. Severe people should be sent to hospital.

Eye Contact: immediately filed eyelid accidentally gets in the eyes with plenty of water rinse, then go hospital for treatment.

Inhalation: quickly get out there to air freshening place, keeps breathing smoothly. Perform oxygen therapy once hard to breach. Perform artificial respiration once breathing stop and then go to hospital.

Ingestion: /

5. FIRE FIGHTING MEASURES

Hazardous Characteristics:

1) The cable heat stability is excellent, no decomposition below 380 °F but less pyrolysis gas over 380 °F after long time heating and more pyrolysis gas over 420 °F. The pyrolysis gas will cause poisoning.

2) The cable has ground wire itself. No current leakage and short circuit under normal use. If overload in a long time, may cause current leakage and short circuit even fire accident.

Hazardous Combustion Products: carbon monoxide, carbon dioxide, hydrogen fluoride, erfluoroisobutylene (PFIB), fluorophosgene.

Method of Extinguishing: The cable is noncombustible. But in order to prevent from being heated and decomposition and produce poisonous gas, spray water to cool them and possible take them outside from fire ground.

Fire Extinguishing Agent: spray water, dry powder, sand, foam, carbon dioxide.
Matters need attention: firefighters have to wear protective whole body suit, self-contained or positive pressure respirator.

6. ACCIDENTAL RELEASE MEASURES

Emergency processing: Turn off the power and evacuate people immediately. Arrange or contact people in charge to control the situation. If there is anyone gets a electric shock or poisonous, take emergency treatments according to the situation. Severe people should be sent to hospital.

7. HANDLING AND STORAGE

Operation Cautions: When use the cable to processing and manufacturing, Processing and manufacturing area should be airtight and total exhaust. Operator is well trained and hew to operating instruction. Do not damage the cable during the process.

Storage Cautions: Store at cool and ventilate and be far away from sunshine in summer. Keep cable separate from oxidant and edible chemicals. Handle with care when

carrying.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Maximum Allowable Concentration: Pointless

Detection Method: /

Engineering Control: enclosed operation, total exhaust. As mechanized and automated as possible.

Respiratory Protection: Avoid breathing in the high-temperature pyrolysis gas during the processing and manufacturing. If the cable cause any pyrolysis gas, use full-face positive pressure air breathing apparatus.

Eye Protection: avoid eye exposure, wear a protection glass with sheath.

Body Protection: wear normal work clothes.

Hand Protection: wear suitable gloves.

Others: No smoking and pay attention to personal hygiene.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Shape: round blue wire, scentless
Melting Point: getting soft above 300°F
Boiling Point: pointless
Density: /
Proportion: no data
Vapor Pressure: pointless
Octanol / Water distribution coefficient of value: pointless
Heat of Combustion (KJ/mol): pointless
Stagnation Temperature: pointless
Critical Pressure(MPa): pointless
Flash Point: pointless
Upper Explosive Limit% (V/V): pointless
Lower Explosive Limit% (V/V): pointless
Solubleness: poorly soluble in water, acetone, ethanol
Main Application: underfloor heating, snow melting, heat tracking in industries, etc.

10. STABILITY AND REACTIVITY

Stability: stable
Prohibited material: Flammable or combustible material

Harm of polymerization: not polymerized

Conditions of avoiding exposure: alkalis and alkaline rare earth metals, react with its metal powder below 370 °F.

Decomposition product: carbon monoxide, carbon dioxide, hydrogen fluoride, erfluoroisobutylene (PFIB), fluorophosgene.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity Test: **LD50:** No data; **LC50:** No data
Irritant: No data

12. ECOLOGICAL INFORMATION

Ecotoxicity: No data
Biodegradability: No data
Abiotic degradability: No data
Other harmful factors: No data

13. DISPOSAL CONSIDERATIONS

Nature of the waste: no hazardous waste number in China, USA, EPA

Disposal Information: waste recycle, unrenewable wast landfill according to country and local laws and rules.

Waste Cautions: in the case of existing inflammables or Combustibles, high-temperature incineration will cause HF.

14. TRANSPORT INFORMATION

Dangerous Goods Code: /
UN Code: /
Packing mark: /
Categories of packing: Class
Packing method: inner package: plastic bag, outer package, carton box
Transport cautions: far away from sunshine. Handle with care when carrying.

15. REGULATORY INFORMATION

Law Information: (Hazardous Chemical Materials Safety Management Regulations) (People's Republic of China State Council Decree 344, from March 15, 2002 implementation). (Workplace Safe Use of Chemicals) ([1996] labor department No. 423) and other regulations, make corresponding provisions for safe use, production, storage, handling and other aspects of hazardous chemicals.

(Commonly Used Classification of Dangerous Chemicals and Signs) (GB13690—1992)

16. OTHER INFORMATION

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UNITHERM international inc.

Gray Silicone

MSDS Number: CL-08-SP
Revision Date: 5-25-16

Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Company Identification

UniTherm International Inc.
711 Jones Street
Lewisville, Texas 75057

Product Identification

Product Name: Gray Silicone
Common Name(s): Silicone Coated Glass Fabric

EMERGENCY TELEPHONE NUMBER:
For emergency involving spill, leak, fire, exposure, or accident call CHEMTREC (800) 424-9300, day or night

2. HAZARDS IDENTIFICATION

Route of Entry: This material may enter the body through inhalation of nuisance dust.
Target Organs: Respiratory system
Inhalation: Sore, raspy throat
Skin Contact: Redness and possible rash; itching
Eye Contact: Itching and redness
Ingestion: N/A

NFPA: Health = 1, Fire = 0, Reactivity = 0
HMIS III: H1/F0/PH0

GHS Signal Word:
WARNING
GHS Classifications:
Health, Skin corrosion/irritation, 3
Health, Specific target organ toxicity - Single exposure, 3
GHS Phrases:
H316 - Causes mild skin irritation
H335 - May cause respiratory irritation
GHS Precautionary Statements:
P264 - Wash _ thoroughly after handling.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Fibrous Glass (CAS 65997-17-3)
Exposure Limits: OSHA PEL 15 mg/m3 (total), 5 mg/m3 (respirable). ACGIH TLV 1 f/cc

Compounded silicone coating

4. FIRST AID MEASURES

Inhalation: Remove person to fresh air. If condition persists, seek medical attention.

Skin Contact: Rinse with copious quantities of cool water. If rash or itching persists, seek medical attention.

Eye Contact: Rinse with water. Do not rub eyes. Seek medical attention.

Ingestion: Not applicable.

5. FIRE FIGHTING MEASURES

Flash Point (Method Used): >250 C by TOC Flammable Limits

LEL: N/A **UEL:** N/A

Extinguishing Media: Water, carbon dioxide, or dry chemical

Special Fire Fighting Procedures: Thermal decomposition of fiber coating may produce an irritating mixture of smoke and fumes.

Unusual Fire and Explosion Hazards: None

6. ACCIDENTAL RELEASE MEASURES

Material is a solid in roll form. If accidently released, rewind material back onto roll.

7. HANDLING AND STORAGE

Handling Precautions: Use adequate material handling equipment.

Storage Requirements: Store in dry place. Use may be at temperature extremes based on product data, but storage should be at ambient temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Local exhaust; dust collection

Personal Protective Equip: HMIS PP, A | Safety Glasses
Safety glasses; cotton gloves; long sleeve clothing

Wash thoroughly with soap and water after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Silver-Gray Rubber Coating

Physical State: Solid
Spec Grav. /Density: 2.4
Boiling Point: N/A
Vapor Pressure: N/A
pH: N/A
Odor: No Odor
Solubility: Negligible
Freezing/Melting Pt.: > 1000°F
Vapor Density: N/A

10. STABILITY AND REACTIVITY

Stability: Material is stable.
Conditions to Avoid: None known.
Materials to Avoid: Strong-oxidizing agents.
Hazardous Decomposition: Carbon monoxide; carbon dioxide
Hazardous Polymerization: Will Not Occur.

11. TOXICOLOGICAL INFORMATION

Direct contact with fiberglass materials or exposure to airborne fiberglass dust may irritate the skin, eyes, nose and throat. Fiberglass can cause itching due to mechanical irritation from the fibers. This is not an allergic reaction to the material. Breathing fibers may irritate the airways resulting in coughing and a scratchy throat. Some people are sensitive to the fibers, while others are not.

12. ECOLOGICAL INFORMATION

No known hazards except for airborne fibers caused by nuisance dust. 10 milligrams per cubic meter for fiber diameters less than 7 microns.

13. DISPOSAL CONSIDERATIONS

Incineration preferred in a federal, state, or local approved facility.

14. TRANSPORT INFORMATION

None special required.

15. REGULATORY INFORMATION

COMPONENT / (CAS/PERC) / CODES

None known

16. OTHER INFORMATION

Disclaimer:

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1. PRODUCT AND COMPANY IDENTIFICATION

Company Identification

UniTherm International Inc.
711 Jones Street
Lewisville, Texas 75057

EMERGENCY TELEPHONE NUMBER:
For emergency involving spill, leak, fire, exposure, or accident call CHEMTREC (800) 424-9300, day or night

Product Identification

Product Name: Stainless Steel Anchor (Hook)
Common Name(s): Stainless Steel Type 301, 302, 303, 304, 305, 308, 309, 310, 314, 321, 347, 415, F6NM, 1.4306, 153MA™, 253MA®, 353MA®, and 2304 - anchors, hooks, rings & washers

2. HAZARDS IDENTIFICATION

Precautionary Statements:

P281: Wear personal protective equipment as required
P302: If on skin, wash with mild soap and running water
P304: If inhaled, move individual to fresh air. Seek medical attention if irritation persists
P305: If in eyes, flush eyes at least 15 minutes; seek medical attention if irritation persists

Hazard Statements: N/A

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Abstracts Service Number: N/A

Hazardous Ingredients	Weight %	OSHA-PEL	ACGIH-TLV	OTHER
Stainless steel alloy				
Chromium (Cr)	10 to 27			
Fume		0.5 mg/m3	0.05 mg/m3	
dust/mist		1.0 mg/m3	0.5 mg/m3	
Nickel (Ni)	0.0 to 35			
fume (soluble)		1.0 mg/m3	0.1 mg/m3	
dust		1.0 mg/m3	1.0 mg/m3	
Manganese (Mn)	0.0 to 15			
fume		5.0 mg/m3 C*	1.0 mg/m3	
dust		5.0 mg/m3 C*	5.0 mg/m3 C*	
Copper	0.0 to 4.0	0.1 mg/m3	0.2 mg/m3	
Tungsten	0.0 to 4.0	none	5.0 mg/m3	
Molybdenum	0.0 to 4.0	15 mg/m3	10 mg/m3	
Aluminum	0.0 to 2.0	none	10 mg/m3	

Silicon	0.0 to 5.0	none	10 mg/m3
Cobalt	0.0 to 5.0	0.1 mg/m3	0.05 mg/m3
Nonhazardous Ingredients			
Sizing	< 1	----------none established----------	
Iron (Fe) dust	48 to 89	----------none----------	
fumes			
(as Iron oxide)		10 mg/m3	5.0 mg/m3

C* = Ceiling limit

4. FIRST AID MEASURES

Inhalation: Move individual to fresh air. Seek medical attention if irritation persists. Administer artificial respiration, if breathing has stopped.

Skin Contact: Wash with mild soap and running water. To avoid further irritation do not rub or scratch irritated areas. Seek medical attention if irritation persists.

Eye Contact: Flush eyes with flowing water for at least 15 minutes. Seek medical attention if irritation persists.

Ingestion: N. A. (Not Applicable)

5. FIRE FIGHTING MEASURES

Extinguishing Equipment: Water, foam, carbon dioxide, dry chemical

Special Fire-Fighting Instructions: In a sustained fire, self-contained breathing apparatus with full-face piece and protective clothing should be worn.

Unusual Fire and Explosion Hazards: None known.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS (Use Appropriate Safety Equipment/PPE):
For solid product, not applicable.
For dusts and fibers generated during fabrication, vacuum and containerize.

7. HANDLING AND STORAGE

Handling: See Section 8.
Storage: No special precautions necessary.
Disposal: Dispose of in accordance with federal, state and local regulations as a solid nonhazardous waste.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: General dilution ventilation and/or local exhaust ventilation should be provided, as necessary, to maintain exposures below PEL's or TLV's. Adequate ventilation must be provided at elevated temperatures.

Respiratory Protection: A properly fitted NIOSH/MHSA approved disposable dust respirator should be

Used when: high dust levels are encountered; the level of Chromium/Nickel/Manganese dust or glass fibers in the air exceeds the OSHA permissible exposure limits; or if irritation occurs. Use an air-supplied respirator in confined spaces. Use industrial hygiene air monitoring to insure that TLV or PEL values are not exceeded. Use respiratory protection in accordance with your company's respiratory protection program and OSHA regulations under 29 CFR 1910.134.

Eye Protection: Safety glasses, goggles or face shields should be worn.

Protective Clothing: Wear loose fitting, long sleeved shirt that covers to the base of the neck, and long pants. Wear gloves when handling product.

Work/Hygienic Practices: Handle in accordance with good industrial hygiene and safety practices:

- Avoid unnecessary exposure to dusts and fibers
- Remove fibers from skin after exposure
- Be careful not to rub or scratch irritated areas. Rubbing or scratching may force the fibers into the skin. The fibers should be washed off. Use of barrier creams can, in some instances, be helpful.
- Use vacuum equipment to remove fibers and dusts from clothing. **COMPRESSED AIR SHOULD NEVER BE USED.** Always wash work clothes separately and wipe out the washer/sink in order to prevent loose glass fibers from getting on other clothes.
- Keep the work area clean of any dusts and fibers generated during fabrication. Use vacuum equipment to clean up dusts and fibers. Avoid sweeping or using compressed air as these techniques resuspend dusts and fibers into the air.
- Have access to safety showers and eye wash fountains.
- For professional use only. Keep out of children's reach.

Exposure Limits (TLVS): N/A

9. PHYSICAL AND CHEMICAL PROPERTIES

Melting Point (Softening): NM (Not Measured)
Boiling Point (°C): N/A (Not Applicable)
Specific Gravity (Bare Glass): NM
Percent Volatile: N/A
Vapor Pressure: (mm Hg): N/A

Vapor Density (Air = 1): N/A
Evaporative Rate (Ethyl Ether = 1): N/A
Solubility in Water: Not soluble
Appearance and Odor: Metallic appearing accessories with no odor.
pH: N/A
Relative Density: N/A
Upper/Lower Flammability or Exposure Limits: N/A
Freezing Point: N/A
Flash Point: N/A
Partition coefficient (n-octanol/water): N/A
Auto Ignition Temperature: N/A
Decomposition Temperature: N/A
Viscosity: N/A

10. STABILITY AND REACTIVITY

Stability (Conditions to Avoid): Product is stable.
Stabilizers: N/A
Incompatibility (Materials to Avoid): None known.
Hazardous Decomposition Products: See Section 11.
Hazardous Polymerization: Will not occur.
Flash Point (°F): N/A (Not Applicable)
Auto Ignition Temperature (°F): N/A
Flammability Limits (%): **LEL:** N/A **UEL:** N/A

11. TOXICOLOGICAL INFORMATION

Primary Routes of Exposure: Inhalation and skin contact.

Health Hazards (Including acute and chronic effects and symptoms of overexposure):

ACUTE: NOTE: Stainless steel products in their usual physical state do not pose any Health hazards. However, when subjected to welding, burning, grinding, cutting, abrasive blasting, heat treatment, pickling, or similar operations, potentially hazardous fumes or dusts may be emitted. Despite the fact that welding, burning, etc. of stainless steel products in this category may produce fumes containing manganese, chromium, nickel and copper, the air concentrations generated of these components are expected to be extremely low.

Iron (Fe): Subjecting iron and alloys containing iron to high temperatures (such as welding) will cause the formation of iron oxide. Long-term exposure to iron oxide fumes or dusts has been associated with a benign lung condition known as siderosis, which

is observable as an x-ray change. No physical impairment of lung function has been linked to siderosis.

Manganese (Mn): Mn intoxication is usually due to the oxide or salts of Mn; elemental Mn exhibits very low toxicity. The dusts and fumes can act as minor irritants to the eyes and respiratory tract. Both acute and chronic exposure may adversely affect the central nervous system (CNS), but symptoms are more likely occur after at least one or two years of prolonged or repeated exposures. Early symptoms may include weakness in the lower extremities, sleepiness, salivation, nervousness and apathy. In more advanced stages, severe muscular incoordination, impaired speech, spastic walking, mask-like facial expressions and uncontrollable laughing may occur. Manganese fumes have also been reported to result in metal fume fever, a flu-like syndrome with symptoms such as dizziness, chills, fever, headache and nausea. An increased incidence of pneumonia, bronchitis and pneumonitis has been reported in some worker populations exposed to manganese. Animal studies indicate exposure may increase susceptibility to bacterial and viral infection.

Chromium (Cr): The toxicity and health hazards of chromium are heavily dependent on its oxidation state. The elemental (as in the metals), divalent and trivalent forms are of very low toxicity. The hexavale nt form (such as occurs in chromates and chromic acids) is very toxic and can produce both acute and chronic effects. Adverse effects on the skin may include ulcerations, irritative dermatitis and allergic skin reactions. Adverse effects on the respiratory system may include bronchospasms, edema, hypersecretion, bronchitis, irritation, allergic asthmatic reactions, and, ulceration and perforation of the nasal septum. Respiratory symptoms may include coughing and wheezing, shortness of breath and nasal itch. Eye irritation or inflammation can also be produced. Exposure to some hexavalent chromium compounds has also been shown to be associated with an increased risk of lung cancer.

Nickel (Ni): Ni fumes and dust are respiratory irritants and may cause severe pneumonitis. Skin contact with nickel and its compounds may cause an allergic dermatitis. The resulting skin rash is often referred to as “nickel itch”. Ni and its compounds may also produce eye irritation, particularly on the inner surfaces of the eyelids (i.e. the conjunctiva). Animal and/or epidemiology studies have linked nickel and certain nickel compounds to an increased incidence of cancer of the lungs and nasal passages.

Copper (Cu): Inhalation of copper fume may cause irritation of the eyes and throat and a flu-like illness called metal fume fever. Signs and symptoms of metal fume fever include fever, muscle aches, nausea, chills, dry throat, cough and weakness. Cu fume may also produce a metallic or sweet taste. Repeated or prolonged exposure to Cu fume may cause discoloration of the skin or hair.

Aluminum (Al): There are no reported known health effects. Aluminum is generally

considered to be in the nuisance dust category.

Silicon (Si): Silicon may produce x-ray changes in the lungs. There has been no known disability reported from the x-ray changes.

Tungsten (W): There has been some reported evidence of pulmonary involvement such as a cough.
Molybdenum (Mo): Molybdenum has caused, in animal studies, irritation of the nose and throat, weight loss and digestive disturbances. There have been no reports of industrial poisoning.

Cobalt (Co): Cobalt has been reported to cause asthma. It may also cause interstitial pneumonitis and sensitization of the respiratory system.

CHRONIC: See carcinogenicity section below. Chronic exposure to Chromium (Cr)/ Nickel (Ni)/Manganese (Mn) fumes or dust may cause skin sensitization, asthma, bronchitis, lung fibrosis or pneumoniosis. It may also cause damage to the kidneys and liver as well as the nervous system.

CARCINOGENICITY:

Hazardous Ingredients:	Listed as carcinogen by:	**ACGIH**	**IARC**	**NTP**	**OSHA**
Chromium (Cr)/Nickel (Ni)**			----none known----		

***** Dusts and fumes containing Chromium (Cr) or Nickel (Ni) should be considered carcinogens.**

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Persons with a history of chronic respiratory or skin conditions that are aggravated by mechanical irritants may be at increased risk for worsening their condition from exposure during use of the product.

12. ECOLOGICAL INFORMATION

N/A

13. DISPOSAL CONSIDERATIONS

See Section 8 (if applicable).

14. TRANSPORT INFORMATION

N/A

15. REGULATORY INFORMATION

N/A

16. OTHER INFORMATION

Disclaimer:

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Individuals should make a determination as to the suitability of the information for their particular purpose(s).

UNITHERM international inc.

Stainless Steel Safety Wire

MSDS Number: SSLW304-SP
Revision Date: 5-25-16

Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Company Identification

UniTherm International Inc.
711 Jones Street
Lewisville, Texas 75057

EMERGENCY TELEPHONE NUMBER:
For emergency involving spill, leak, fire, exposure, or accident call CHEMTREC (800) 424-9300, day or night

Product Identification

Product Name: Stainless Steel Safety Wire
Common Name(s): Stainless Steel Type 302/304 ASTM A 580, 305 and 316 - sheet, foil, rod, wire, pellets, target & screen

2. HAZARDS IDENTIFICATION

GHS Classification (29 CFR 1910.1200): Not classified as hazardous
GHS Label Elements:
Signal Word: N/A
Hazard Statements: N/A
Precautionary Statements: N/A

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient:	CAS#:	%:	EC#:
Iron	7439-89-6	Balance	231-096-4
Chromium	7440-47-3	<1-20	231-157-5
Nickel	7440-02-0	<1-14	231-111-4
Tungsten	7440-33-7	<0.1-10	231-143-9
Molybdenum	7439-98-7	<0.1-10	231-107-2
Manganese	7439-96-5	<0.1-2	231-105-1
Silicon	7440-21-3	<0.1-1	231-130-8

4. FIRST AID MEASURES

General Measures: Under normal handling and use, exposure to solid forms of this material present few health hazards. Subsequent operations such as grinding, melting or welding may produce potentially hazardous dust or fumes which can be inhaled or come in contact with the skin or eyes.

INHALATION: Remove to fresh air, keep warm and quiet, give oxygen if breathing is difficult. Seek medical attention.

INGESTION: Rinse mouth with water. Do not induce vomiting. Seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person.

SKIN: Remove contaminated clothing, brush material off skin, wash affected area with

soap and water. Seek medical attention if symptoms persist.

EYES: Flush eyes with lukewarm water, including under upper and lower eyelids, for at least 15 minutes. Seek medical attention if symptoms persist.

Most Important Symptoms/Effects, Acute and Delayed: May cause irritation. See section 11 for more information.

Indication of Immediate Medical Attention and Special Treatment: No other relevant information available.

5. FIRE FIGHTING MEASURES

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

Unsuitable Extinguishing Media: No information available.

Specific Hazards Arising from the Material: This product does not present fire or explosion hazards as shipped. Small chips, fine turnings and dust from processing may be ignitable. May emit metal oxide fumes under fire conditions.

Special Protective Equipment and Precautions for Firefighters: Full face, self-contained breathing apparatus and full protective clothing when necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures: Wear appropriate respiratory and protective equipment specified in section 8. Avoid dust formation. Avoid contact with skin and eyes. Avoid breathing dust or fume.

Methods and Materials for Containment and Cleaning Up: Sweep or scoop up. Place in a closed container for further handling and disposal. Scrap can be collected for recycling.

Environmental Precautions: Do not allow to enter drains or to be released to the environment.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid creating dust. Provide adequate ventilation if dusts are created. See section 8 for information on personal protection equipment.

Conditions for Safe Storage: Store in a sealed container. Store in a cool, dry area. See section 10 for more information on incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:	**OSHA/PEL:**	**ACGIH/TLV:**
Iron	No exposure limit established	No exposure limit established
Chromium	1 mg/m3	0.5 mg/m3
Nickel	1 mg/m3	1.5 mg/m3
Tungsten	5 mg/m3	5 mg/m3
Molybdenum	15 mg/m3 (insoluble compounds, total dust)	10 mg/m3 (insoluble compounds, inhalable)
Manganese	5 mg/m3	0.2 mg/m3
Silicon	5 mg/m3	5 mg/m3 (respirable)

Engineering Controls: Ensure adequate ventilation to maintain exposures below occupational limits. Whenever possible the use of local exhaust ventilation or other engineering controls is the preferred method of controlling exposure to airborne dust and fume to meet established occupational exposure limits. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Respiratory Protection: If permissible levels are exceeded, use NIOSH approved dust respirator.

Eye Protection: Safety glasses

Skin Protection: Not normally needed. Wear impermeable gloves, protective work clothing as necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:
Form: Solid in various forms
Color: Silver-gray metallic
Odor: Odorless
Odor Threshold: Not determined
pH: N/A
Melting Point: 743°F - 790° (1370°C - 1455°C)
Boiling Point: No data
Flash Point: N/A
Evaporation Rate: N/A
Flammability: No data
Upper Flammable Limit: No data
Lower Flammable Limit: No data
Vapor Pressure: No data
Vapor Density: N/A

Relative Density (Specific Gravity): 8 g/cc
Solubility in H2O: Insoluble
Partition Coefficient (n-octanol/water): Not determined
Autoignition Temperature: No data
Decomposition Temperature: No data
Viscosity: N/A

10. STABILITY AND REACTIVITY

Reactivity: No data
Chemical Stability: Stable under recommended storage conditions.
Possibility of Hazardous Reactions: No data
Conditions to Avoid: Avoid creating or accumulating fines or dusts.
Incompatible Materials: Acids
Hazardous Decomposition Products: Metal oxide fume.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, skin, eyes. Product as shipped does not present an inhalation hazard; however subsequent operations may create dusts or fumes which could be inhaled.

Symptoms of Exposure: Fines/dusts may irritate skin and eyes.

Acute and Chronic Effects:

Iron: Irritating to the respiratory tract, iron compounds may cause pulmonary fibrosis if dusts are inhaled. Inhalation of large amounts may cause iron pneumoconiosis. Chronic inhalation of finely divided powder may cause chronic iron poisoning and pathological deposition of iron in the body tissue. Ingestion may cause vomiting, diarrhea, pink urine, black stool, and liver damage. Iron compounds may also cause damage to the kidneys.

Chromium: Although much is known about the health effects of chromium compounds, the health effects of chromium metal, Cr(0), is not well studied. Due to insolubility most elements in their metallic state are not considered to be serious health hazards.

Nickel: The most common harmful health effect of metallic nickel in humans is an allergic skin reaction in those who are sensitive to nickel. Although nickel compounds are known human carcinogens, the evidence suggests that the relatively insoluble metallic nickel is less likely to present a carcinogenic hazard than are the nickel compounds that tend to release proportionately more nickel ion.

Tungsten: No data

Molybdenum: No data

Manganese: Chronic inhalation exposure of humans to high levels of manganese may result in a syndrome called manganism which typically begins with feelings of weakness and lethargy and progresses to other symptoms such as gait disturbances, clumsiness, tremors, speech disturbances, a mask-like facial expression and psychological disturbances. Manganese is an essential micronutrient in humans.

Silicon: Inhalation or contact with silicon dusts may cause irritation. There is no available data to show any toxic effects for elemental silicon.

Acute Toxicity: No data

Carcinogenicity: **Nickel: NTP:** R - reasonably anticipated to be a human carcinogen
IARC: 2B - possibly carcinogenic to humans

To the best of our knowledge the chemical, physical and toxicological characteristics of the substance are not fully known.

12. ECOLOGICAL INFORMATION

Ecotoxicity: No data
Persistence and Degradability: No data
Bioaccumulative Potential: No data
Mobility in Soil: No data
Other Adverse Effects: No further relevant information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Product: Dispose of in accordance with Federal, State and Local regulations.
Packaging: Dispose of in accordance with Federal, State and Local regulations.

14. TRANSPORT INFORMATION

DOT/ADR/IATA/IMDG Regulations: Not regulated
UN Number: N/A
UN Proper Shipping Name: N/A
Transport Hazard Class: N/A
Packing Group: N/A
Marine Pollutant: No
Special Precautions: N/A

15. REGULATORY INFORMATION

TSCA Listed: All components are listed.
Regulation (EC) No 1272/2008 (CLP): N/A
Canada WHMIS Classification (CPR, SOR/88-66): N/A
HMIS Ratings: Health: 0 **Flammability:** 0 **Reactivity:** 0
NFPA Ratings: Health: 0 **Flammability:** 0 **Reactivity:** 0
Chemical Safety Assessment: A chemical safety assessment has not been carried out.

16. OTHER INFORMATION

Disclaimer:
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1. PRODUCT AND COMPANY IDENTIFICATION

Company Identification

UniTherm International Inc.
711 Jones Street
Lewisville, Texas 75057

EMERGENCY TELEPHONE NUMBER:
For emergency involving spill, leak, fire, exposure, or accident call CHEMTREC (800) 424-9300, day or night

Product Identification

Product Name: Stainless Steel Washer
Common Name(s): Stainless Steel Type 301, 302, 303, 304, 305, 308, 309, 310, 314, 321, 347, 415, F6NM, 1.4306, 153MA™, 253MA®, 353MA®, and 2304 - anchors, hooks, rings & washers

2. HAZARDS IDENTIFICATION

Precautionary Statements:

P281: Wear personal protective equipment as required
P302: If on skin, wash with mild soap and running water
P304: If inhaled, move individual to fresh air. Seek medical attention if irritation persists
P305: If in eyes, flush eyes at least 15 minutes; seek medical attention if irritation persists

Hazard Statements: N/A

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Abstracts Service Number: N/A

Hazardous Ingredients	Weight %	OSHA-PEL	ACGIH-TLV	OTHER
Stainless steel alloy				
Chromium (Cr)	10 to 27			
Fume		0.5 mg/m3	0.05 mg/m3	
dust/mist		1.0 mg/m3	0.5 mg/m3	
Nickel (Ni)	0.0 to 35			
fume (soluble)		1.0 mg/m3	0.1 mg/m3	
dust		1.0 mg/m3	1.0 mg/m3	
Manganese (Mn)	0.0 to 15			
fume		5.0 mg/m3 C*	1.0 mg/m3	
dust		5.0 mg/m3 C*	5.0 mg/m3 C*	
Copper	0.0 to 4.0	0.1 mg/m3	0.2 mg/m3	
Tungsten	0.0 to 4.0	none	5.0 mg/m3	
Molybdenum	0.0 to 4.0	15 mg/m3	10 mg/m3	
Aluminum	0.0 to 2.0	none	10 mg/m3	
Silicon	0.0 to 5.0	none	10 mg/m3	

Cobalt	0.0 to 5.0	0.1 mg/m3	0.05 mg/m3
Nonhazardous Ingredients			
Sizing	< 1	----------none established----------	
Iron (Fe) dust	48 to 89	----------none----------	
fumes			
(as Iron oxide)		10 mg/m3	5.0 mg/m3

C* = Ceiling limit

4. FIRST AID MEASURES

Inhalation: Move individual to fresh air. Seek medical attention if irritation persists. Administer artificial respiration, if breathing has stopped.

Skin Contact: Wash with mild soap and running water. To avoid further irritation do not rub or scratch irritated areas. Seek medical attention if irritation persists.

Eye Contact: Flush eyes with flowing water for at least 15 minutes. Seek medical attention if irritation persists.

Ingestion: N. A. (Not Applicable)

5. FIRE FIGHTING MEASURES

Extinguishing Equipment: Water, foam, carbon dioxide, dry chemical

Special Fire-Fighting Instructions: In a sustained fire, self-contained breathing apparatus with full-face piece and protective clothing should be worn.

Unusual Fire and Explosion Hazards: None known.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS (Use Appropriate Safety Equipment/PPE):
For solid product, not applicable.
For dusts and fibers generated during fabrication, vacuum and containerize.

7. HANDLING AND STORAGE

Handling: See Section 8.
Storage: No special precautions necessary.
Disposal: Dispose of in accordance with federal, state and local regulations as a solid nonhazardous waste.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: General dilution ventilation and/or local exhaust ventilation should be provided, as necessary, to maintain exposures below PEL's or TLV's. Adequate ventilation must be provided at elevated temperatures.

Respiratory Protection: A properly fitted NIOSH/MHSA approved disposable dust respirator should be

Used when: high dust levels are encountered; the level of Chromium/Nickel/Manganese dust or glass fibers in the air exceeds the OSHA permissible exposure limits; or if irritation occurs. Use an air-supplied respirator in confined spaces. Use industrial hygiene air monitoring to insure that TLV or PEL values are not exceeded. Use respiratory protection in accordance with your company's respiratory protection program and OSHA regulations under 29 CFR 1910.134.

Eye Protection: Safety glasses, goggles or face shields should be worn.

Protective Clothing: Wear loose fitting, long sleeved shirt that covers to the base of the neck, and long pants. Wear gloves when handling product.

Work/Hygienic Practices: Handle in accordance with good industrial hygiene and safety practices:

- Avoid unnecessary exposure to dusts and fibers
- Remove fibers from skin after exposure
- Be careful not to rub or scratch irritated areas. Rubbing or scratching may force the fibers into the skin. The fibers should be washed off. Use of barrier creams can, in some instances, be helpful.
- Use vacuum equipment to remove fibers and dusts from clothing. **COMPRESSED AIR SHOULD NEVER BE USED.** Always wash work clothes separately and wipe out the washer/sink in order to prevent loose glass fibers from getting on other clothes.
- Keep the work area clean of any dusts and fibers generated during fabrication. Use vacuum equipment to clean up dusts and fibers. Avoid sweeping or using compressed air as these techniques resuspend dusts and fibers into the air.
- Have access to safety showers and eye wash fountains.
- For professional use only. Keep out of children's reach.

Exposure Limits (TLVS): N/A

9. PHYSICAL AND CHEMICAL PROPERTIES

Melting Point (Softening): NM (Not Measured)
Boiling Point (°C): N/A (Not Applicable)
Specific Gravity (Bare Glass): NM
Percent Volatile: N/A
Vapor Pressure: (mm Hg): N/A
Vapor Density (Air = 1): N/A

Evaporative Rate (Ethyl Ether = 1): N/A
Solubility in Water: Not soluble
Appearance and Odor: Metallic appearing accessories with no odor.
pH: N/A
Relative Density: N/A
Upper/Lower Flammability or Exposure Limits: N/A
Freezing Point: N/A
Flash Point: N/A
Partition coefficient (n-octanol/water): N/A
Auto Ignition Temperature: N/A
Decomposition Temperature: N/A
Viscosity: N/A

10. STABILITY AND REACTIVITY

Stability (Conditions to Avoid): Product is stable.
Stabilizers: N/A
Incompatibility (Materials to Avoid): None known.
Hazardous Decomposition Products: See Section 11.
Hazardous Polymerization: Will not occur.
Flash Point (°F): N/A (Not Applicable)
Auto Ignition Temperature (°F): N/A
Flammability Limits (%): **LEL:** N/A **UEL:** N/A

11. TOXICOLOGICAL INFORMATION

Primary Routes of Exposure: Inhalation and skin contact.

Health Hazards (Including acute and chronic effects and symptoms of overexposure):

ACUTE: NOTE: Stainless steel products in their usual physical state do not pose any Health hazards. However, when subjected to welding, burning, grinding, cutting, abrasive blasting, heat treatment, pickling, or similar operations, potentially hazardous fumes or dusts may be emitted. Despite the fact that welding, burning, etc. of stainless steel products in this category may produce fumes containing manganese, chromium, nickel and copper, the air concentrations generated of these components are expected to be extremely low.

Iron (Fe): Subjecting iron and alloys containing iron to high temperatures (such as welding) will cause the formation of iron oxide. Long-term exposure to iron oxide fumes or dusts has been associated with a benign lung condition known as siderosis, which is observable as an x-ray change. No physical impairment of lung function has been

linked to siderosis.

Manganese (Mn): Mn intoxication is usually due to the oxide or salts of Mn; elemental Mn exhibits very low toxicity. The dusts and fumes can act as minor irritants to the eyes and respiratory tract. Both acute and chronic exposure may adversely affect the central nervous system (CNS), but symptoms are more likely occur after at least one or two years of prolonged or repeated exposures. Early symptoms may include weakness in the lower extremities, sleepiness, salivation, nervousness and apathy. In more advanced stages, severe muscular incoordination, impaired speech, spastic walking, mask-like facial expressions and uncontrollable laughing may occur. Manganese fumes have also been reported to result in metal fume fever, a flu-like syndrome with symptoms such as dizziness, chills, fever, headache and nausea. An increased incidence of pneumonia, bronchitis and pneumonitis has been reported in some worker populations exposed to manganese. Animal studies indicate exposure may increase susceptibility to bacterial and viral infection.

Chromium (Cr): The toxicity and health hazards of chromium are heavily dependent on its oxidation state. The elemental (as in the metals), divalent and trivalent forms are of very low toxicity. The hexavale nt form (such as occurs in chromates and chromic acids) is very toxic and can produce both acute and chronic effects. Adverse effects on the skin may include ulcerations, irritative dermatitis and allergic skin reactions. Adverse effects on the respiratory system may include bronchospasms, edema, hypersecretion, bronchitis, irritation, allergic asthmatic reactions, and, ulceration and perforation of the nasal septum. Respiratory symptoms may include coughing and wheezing, shortness of breath and nasal itch. Eye irritation or inflammation can also be produced. Exposure to some hexavalent chromium compounds has also been shown to be associated with an increased risk of lung cancer.

Nickel (Ni): Ni fumes and dust are respiratory irritants and may cause severe pneumonitis. Skin contact with nickel and its compounds may cause an allergic dermatitis. The resulting skin rash is often referred to as “nickel itch”. Ni and its compounds may also produce eye irritation, particularly on the inner surfaces of the eyelids (i.e. the conjunctiva). Animal and/or epidemiology studies have linked nickel and certain nickel compounds to an increased incidence of cancer of the lungs and nasal passages.

Copper (Cu): Inhalation of copper fume may cause irritation of the eyes and throat and a flu-like illness called metal fume fever. Signs and symptoms of metal fume fever include fever, muscle aches, nausea, chills, dry throat, cough and weakness. Cu fume may also produce a metallic or sweet taste. Repeated or prolonged exposure to Cu fume may cause discoloration of the skin or hair.

Aluminum (Al): There are no reported known health effects. Aluminum is generally considered to be in the nuisance dust category.

Silicon (Si): Silicon may produce x-ray changes in the lungs. There has been no known disability reported from the x-ray changes.

Tungsten (W): There has been some reported evidence of pulmonary involvement such as a cough.
Molybdenum (Mo): Molybdenum has caused, in animal studies, irritation of the nose and throat, weight loss and digestive disturbances. There have been no reports of industrial poisoning.

Cobalt (Co): Cobalt has been reported to cause asthma. It may also cause interstitial pneumonitis and sensitization of the respiratory system.

CHRONIC: See carcinogenicity section below. Chronic exposure to Chromium (Cr)/ Nickel (Ni)/Manganese (Mn) fumes or dust may cause skin sensitization, asthma, bronchitis, lung fibrosis or pneumoniosis. It may also cause damage to the kidneys and liver as well as the nervous system.

CARCINOGENICITY:

Hazardous Ingredients:	Listed as carcinogen by:	**ACGIH**	**IARC**	**NTP**	**OSHA**
Chromium (Cr)/Nickel (Ni)**		----none known----			

***** Dusts and fumes containing Chromium (Cr) or Nickel (Ni) should be considered carcinogens.**

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Persons with a history of chronic respiratory or skin conditions that are aggravated by mechanical irritants may be at increased risk for worsening their condition from exposure during use of the product.

12. ECOLOGICAL INFORMATION

N/A

13. DISPOSAL CONSIDERATIONS

See Section 8 (if applicable).

14. TRANSPORT INFORMATION

N/A

15. REGULATORY INFORMATION

N/A

16. OTHER INFORMATION

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