

SAFETY DATA SHEET

Issuing Date 21 August 2017

Revision Date 19 April 2018

Revision Number 2



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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Thermafuse F450 Hot Armor

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Hair Styling

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Grayson O Company

Supplier Address PO Box 278
Kannapolis
NC
28082
US

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Emergency telephone number 704-932-6195

2. HAZARDS IDENTIFICATION


Classification

This product is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin sensitization	Category 1
Flammable liquids	Category 3



GHS Label elements, including precautionary statements**Emergency Overview**

Signal word	Warning
Hazard Statements May cause an allergic skin reaction Flammable liquid and vapor	
	
Appearance Slight Yellowish Tint	Physical State Liquid
Odor Fruity	

Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ ventilating/ lighting/ equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Specific treatment (see supplemental first aid instructions on this label)

Skin

If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Fire

In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

Other information

Causes mild skin irritation

Toxic to aquatic life with long lasting effects

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons

PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION

Interactions with Other Chemicals

None known based on information provided.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%	Trade Secret
Cyclotetrasiloxane	556-67-2	*	*
Cyclopentasiloxane	541-02-6	*	*
Sorbitan Trioleate	26266-58-0	*	*
Phenyl Trimethicone	70131-69-0	*	*
Ethylhexyl Methoxycinnamate	5466-77-3	*	*

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES**First aid measures****General Advice**

Show this safety data sheet to the doctor in attendance.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin Contact

May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation

Remove to fresh air.

Ingestion

Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person.

Self-protection of the first aider

Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed**Most Important Symptoms and Effects**

Itching. Rashes. Hives.



Indication of any immediate medical attention and special treatment needed**Notes to Physician**

May cause sensitization of susceptible persons. Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical. Carbon dioxide (CO₂). Water spray. Alcohol resistant foam.

Unsuitable extinguishing media

CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical

Product is or contains a sensitizer. May cause sensitization by skin contact. Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Uniform Fire Code

Sensitizer: Liquid
Flammable Liquid: I-C

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge Yes.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.
Other Information	Ventilate the area.

Environmental Precautions

Environmental Precautions	Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
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Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways.
Methods for cleaning up	Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Take precautionary measures against static discharges.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling	Handle in accordance with good industrial hygiene and safety practice. Use personal protection equipment. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions.
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Conditions for safe storage, including any incompatibilities

Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.
Incompatible Products	None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Cyclotetrasiloxane 556-67-2	*	TWA: 10 ppm	*
Cyclopentasiloxane 541-02-6	*	TWA: 10 ppm	*
Ethanol 64-17-5	STEL: 1000 PPM	TWA: 1000 ppm	TWA: 1000 ppm

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits Immediately Dangerous to Life or Health

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tight sealing safety goggles.

Skin and Body Protection Wear protective gloves and protective clothing. Long sleeved clothing. Chemical resistant apron. Impervious gloves. Antistatic boots.

Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Take off contaminated clothing and wash before reuse. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Liquid	Odor	Fruity
Appearance	Clear	Odor Threshold	No information available
Color	Slight Yellowish Tint		
Property	Values	Remarks	Method
pH	UNKNOWN	None known	
Melting / freezing point	-44°C		
Boiling point / boiling range	211°C		
Flash Point	77°C (170.6°F)	Closed Cup	
Evaporation Rate	No data available	None known	
Flammability (solid, gas)	No data available	None known	
Flammability Limit in Air			
Upper flammability limit	No data available	None known	
Lower flammability limit	No data available	None known	
Vapor pressure	No data available	None known	
Vapor density	No data available	None known	
Specific Gravity	0.9560		
Water Solubility	Insoluble in water		
Solubility in other solvents	No data available	None known	
Partition coefficient: n-octanol/water	No data available	None known	
Autoignition temperature	No data available	None known	
Decomposition temperature	No data available	None known	
Kinematic viscosity	No data available	None known	
Dynamic viscosity	No data available	None known	

Explosive properties	No data available
Oxidizing Properties	No data available

Other Information

Softening Point	No data available
VOC Content (%)	Not Applicable
Particle Size	No data available
Particle Size Distribution	

10. STABILITY AND REACTIVITY**Reactivity**

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

None known based on information supplied.

Hazardous Decomposition Products

Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye Contact	Specific test data for the substance or mixture is not available. Contact with eyes may cause irritation.
Skin Contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Cyclotetrasiloxane 556-67-2	> 4,800 mg/kg (Rat)	>2.5 ml/kg (Rabbit)	= 2975 ppm (Rat) 4h
Cyclopentasiloxane 541-02-6	> 24,134 mg/kg (Rat)	>2,000 mg/kg (Rabbit)	= 8.67 mg/l (Rat) 4h
Phenyl Trimethicone 70131-69-0	*	>2,000 mg/kg (Rabbit)	= 0.467 mg/l (Rat) 4h
Ethylhexyl Methoxycinnamate 5466-77-3	> 20,000 mg/kg (Rat)	>20,000 mg/kg (Rabbit)	8.67 mg/l (Rat)4h

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Information on toxicological effects

Symptoms Itching. Rashes. Hives.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause sensitization of susceptible persons. May cause sensitization by skin contact.

Mutagenic Effects No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen..

Chemical Name	ACGIH	IARC	NTP	OSHA

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Chronic Toxicity May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects. Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage.

Target Organ Effects Skin. Blood. Central Nervous System (CNS). Eyes. Liver. Reproductive System. Respiratory system.

Aspiration Hazard No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

Not applicable

12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution

Air: Low molecular weight volatile siloxanes in air are degraded by reaction with hydroxyl radicals, which is the dominant degradation process for most chemicals in the atmosphere.

Water: Low Molecular weight volatile siloxanes have very low water solubility and evaporate to air.

Soil: Low molecular weight volatile siloxanes in soil are removed by several simultaneously occurring processes including volatilization, hydrolysis, and clay-catalyzed degradation.

Environmental Effects:

Toxicity to Water Organisms: This product is volatile and has a very short half-life in the aquatic environment and therefore does not present a risk to aquatic organisms.

Toxicity to Soil Organisms: Due to its volatility, this product is unlikely to be found in the terrestrial compartment.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Cyclotetrasiloxane 556-67-2	72h ErC50: >0.022 mg/L (Pseudokirchneriella subcapitata (green algae))	96h NOEC: >= 0.0044 mg/L (Oncorhynchus mykiss (rainbow trout))	★	96h EC50: >0.0091 mg/L (Mysidopsis bahia (opossum shrimp))
Cyclopentasiloxane 541-02-6	96h ErC50: >0.012 mg/L (Pseudokirchneriella subcapitata (green algae))	LC50: > 16 mg/L (Oncorhynchus mykiss (rainbow trout))	★	48h EC50: > 2.9 mg/L OECD Test Guideline 202
Phenyl Trimethicone 70131-69-0	★	96h LC50: > 500 mg/L (Danio rerio (Zebra fish))	★	★
Ethylhexyl Methoxycinnamate 5466-77-3	96h EC50: >100000 mg/L (Active Sludge) OECD Test Guideline 209	96h LC50: > 1000 mg/L (Danio rerio (Zebra fish)) OECD Test Guideline 203	★	48h EC50: = 3.2 mg/L (Crustacea)

Persistence and Degradability

No information available.

Bioaccumulation:

Chemical Name	Pow
Cyclotetrasiloxane 556-67-2	6.48

Fate and Effects in Waste Water Treatment Plants: Low molecular weight volatile siloxanes are efficiently removed (>90%) during wastewater treatment with approximately equal amounts going to the atmosphere and the sludge. Low molecular weight volatile siloxanes in treated wastewater effluent will be bound to particulate matter because of very low water solubility.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods	This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).
Contaminated Packaging	Dispose of contents/containers in accordance with local regulations.
US EPA Waste Number	D001
California Hazardous Waste Codes	561

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name	CONSUMER COMMODITY
Hazard Class	ORM-D
Description	CONSUMER COMMODITY, ORM-D
Emergency Response Guide Number	127

TDG

UN-No.	UN 1993
Proper Shipping Name	FLAMMABLE LIQUID, N.O.S. (Octamethylcyclotetrasiloxane)
Hazard Class	3
Packing Group	III
Labels	3

MEX

Not regulated

ICAO

Not regulated

IATA

UN-No.	UN 1993
Proper Shipping Name	Flammable Liquid, n.o.s. (Octamethylcyclotetrasiloxane)
Hazard Class	3
Packing Group	III
Labels	Flammable Liquids
Packing instruction	366 (cargo aircraft); 355 (passenger aircraft)

IMDG/IMO

UN-No.	UN 1993
Proper Shipping Name	FLAMMABLE LIQUID, N.O.S. (Octamethylcyclotetrasiloxane)
Hazard Class	3
Packing Group	III
Labels	3
EmS Code	F-E, <u>S-E</u>
Marine pollutant	no

RID

Not regulated

ADR

Not regulated



AND

Not regulated

15. REGULATORY INFORMATION**International Inventories**

TSCA Complies

DSL All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemical.

U.S. State Right-to-Know Regulations

	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Cyclotetrasiloxane 556-67-2			X		
Cyclopentasiloxane 541-02-6			x		
Phenyl Trimethicone 70131-69-0	x		x		

International Regulations**Mexico**

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Mexico - Occupational Exposure Limits - Carcinogens

Canada**WHMIS Hazard Class**

B2 - Flammable liquid

**16. OTHER INFORMATION**

NFPA	Health Hazards 0	Flammability 3	Instability 0	Physical and Chemical Hazards -
HMIS	Health Hazards 0	Flammability 3	Physical Hazard 0	Personal Protection X

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Issuing Date 21 August 2017
Revision Date 19 April 2018
Revision Note Version 2

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet

