



MATERIAL SAFETY DATA SHEET

1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: Thermojacket D

Manufacturer Name:

Federal Mogul World Headquarters
26555 Northwestern Highway
Southfield, Michigan 48033

Emergency Telephone:

24hr EP (INFOTRAC): 1-800-535-5053
International: (001) 352-323-3500

Non-emergency Telephone:

1-248-354-9844

Intended Use: Industrial chemical

Contact Person:

MSDS Request (voicemail) 1-248-354-9844

2 HAZARDS IDENTIFICATION

Emergency Overview

Physical State: Solid

Color: White

Odor: Odorless

WARNING!

Although several of the ingredients used to formulate this product may be hazardous in the raw state, the manufacturing process results in a solid infusible form, binding and otherwise, rendering the product inert. The ingredients may be released from the product by operations such as overheating, burning, machining, abrading, or riveting. Causes skin irritation.

Potential Health Effects

Inhalation: The ingredients may be released from the product by operations such as overheating, burning, machining, abrading, or riveting. Dust may irritate the respiratory system.

Eye Contact: The ingredients may be released from the product by operations such as overheating, burning, machining, abrading, or riveting. Dust in the eyes will cause irritation.

Skin Contact: Causes skin irritation. The ingredients may be released from the product by operations such as overheating, burning, machining, abrading, or riveting.

Ingestion: No adverse effects due to ingestion are expected.

Chronic Health Effects: The ingredients may be released from the product by operations such as overheating, burning, machining, abrading, or riveting. Chronic exposure to fiber dust may cause permanent lung injury.

Target Organ(s): | Skin |

OSHA Regulatory Status: This product is hazardous according to OSHA 29CFR 1910.1200.

Environment: No data available.

3 COMPOSITION / INFORMATION ON INGREDIENTS

General Information: The ingredients may be released from the product by operations such as overheating, burning, machining, abrading, or riveting.

Chemical Name	CAS-No.	Concentration*
†Continuous filament glass fiber	65997-17-3	55 - 65%
†Amorphous silica	7631-86-9	36 - 42%
†Aluminium oxide	1344-28-1	< 3%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

† This chemical is hazardous according to OSHA/WHMIS criteria.

4 FIRST AID MEASURES

Inhalation: Move injured person into fresh air and keep person calm under observation. If necessary, seek hospital and take along these instructions.

Eye Contact: Flush thoroughly with water for at least 15 minutes. Dust in the eyes: Make sure to remove any contact lenses from the eyes before rinsing. Get medical attention if irritation persists after washing.

Skin Contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention.

Ingestion: If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice.

5 FIRE-FIGHTING MEASURES

Extinguishing Media: This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable Extinguishing Media: None.

Special Fire Fighting Procedures: Use standard firefighting procedures and consider the hazards of other involved materials.

Unusual Fire & Explosion Hazards: The product is non-combustible. If heated, toxic vapors may be formed.

Hazardous Combustion Products: Carbon Dioxide, Carbon Monoxide

Protective Measures: Selection of respiratory protection for fire fighting: follow the general fire

precautions indicated in the workplace.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid dust formation. Avoid inhalation of dust and contact with skin and eyes. Wear necessary protective equipment. For personal protection, see section 8 of the MSDS.

Spill Cleanup Methods: Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into closed container.

Environmental Precautions: Avoid discharge into water courses or onto the ground. Collect and dispose of spillage as indicated in section 13 of the MSDS.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

7 HANDLING AND STORAGE

Handling: Provide adequate ventilation. Avoid inhalation of dust and contact with skin and eyes. Use work methods which minimize dust production. Wear suitable protective clothing and gloves. Observe good industrial hygiene practices.

Storage: Store in tightly closed original container. Avoid conditions which create dust. Store away from incompatible materials.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	Source	Type	Exposure Limits	Notes
Aluminium oxide	US. ACGIH TLV	TWA	10 mg/m ³	
Aluminium oxide (Respirable fraction.)	US. OSHA Z-1 PEL	TWA	5 mg/m ³	
Amorphous silica	US. NIOSH Guide	IDLH	3000 mg/m ³	
Amorphous silica	US. OSHA Z-3 PEL	TWA	20 Mppcf	
Continuous filament glass fiber (Inhalable fraction.)	US. ACGIH TLV	TWA	5 mg/m ³	

Consult Canadian Provincial Regulations and/or Mexican Regulations on exposure limits, if applicable.

Engineering Controls: Provide sufficient ventilation for operations causing dust formation. Observe occupational exposure limits and minimize the risk of inhalation of dust.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: High-efficiency particulate respirator.

Eye Protection: Wear approved safety goggles.

Hand Protection: Wear protective gloves. Suitable gloves can be recommended by the glove supplier.

Skin Protection: Risk of contact: Wear suitable protective clothing.

Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental Exposure Controls: Environmental manager must be informed of all major spillages.

9	PHYSICAL AND CHEMICAL PROPERTIES
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Color: White

Odor: Odorless

Odor Threshold: No data available.

Physical State: Solid

pH: Not applicable

Melting Point: >1649°C (3000°F)

Freezing Point: No data available.

Boiling Point: Not applicable.

Flash Point: No data available.

Evaporation Rate: Not applicable.

Flammability Limit - Upper (%): No data available.

Flammability Limit - Lower (%): No data available.

Vapor Pressure: Not applicable.

Vapor Density (Air=1): No data available.

Specific Gravity: 0.32

Solubility in Water: Insoluble

Solubility (Other): No data available.

Partition Coefficient (n-Octanol/water): No data available.

Autoignition Temperature: No data available.

Decomposition Temperature: No data available.

Viscosity: Not applicable.

10	STABILITY AND REACTIVITY
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Stability: Material is stable under normal conditions.

Conditions to Avoid: Strong oxidizing agents.

Incompatible Materials: Strong Acid Contact

Hazardous Decomposition Products:

At Elevated Temperatures:	Carbon Dioxide, Carbon Monoxide
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Possibility of Hazardous Reactions: Will not occur.

11	TOXICOLOGICAL INFORMATION
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Listed Carcinogens:

Chemical Name	IARC	NTP	OSHA	ACGIH
Amorphous silica	3	Not Listed	Not Listed	Not Listed
Aluminium oxide	Not Listed	Not Listed	Not Listed	A4
Continuous filament glass fiber	Not Listed	Listed	Not Listed	A2

IARC: 1 = Carcinogenic to Humans; 2A = Probably Carcinogenic to Humans; 2B = Possibly Carcinogenic to Humans; 3 = Not classifiable as to carcinogenicity to humans; 4 = Probably not carcinogenic to humans; Not listed = Not evaluated by IARC.

ACGIH: A1 = Confirmed Human Carcinogen; A2 = Suspected Human Carcinogen; A3 = Confirmed Animal Carcinogen; A4 = Not classifiable as a human carcinogen; A5 = Not suspected to be a human carcinogen; Not listed = Not evaluated by ACGIH.

Product Information**Acute Toxicity:****Test Results**

No test data available for the product.

Other Acute: Causes skin irritation.

Chronic Toxicity: Chronic exposure to fiber dust may cause permanent lung injury.

12	ECOLOGICAL INFORMATION
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Ecotoxicity: No data available.

Mobility: The product contains substances which are insoluble in water and which sediment in water systems.

Persistence and Degradability: The product contains inorganic compounds which are not biodegradable.

Bioaccumulation Potential: No data available.

13	DISPOSAL CONSIDERATIONS
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General Information: Dispose of waste and residues in accordance with local authority requirements.

Disposal Methods: Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

Container: Since emptied containers retain product residue, follow label warnings even after container is emptied.

14	TRANSPORT INFORMATION
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DOT Not regulated.

TDG Not regulated.

IATA Not regulated.

IMDG Not regulated.

15	REGULATORY INFORMATION
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Canadian Controlled Products Regulations: This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations, Section 33, and the MSDS contains all required information.

WHMIS Classification: D2B

Mexican Dangerous Statement: This product is dangerous according to Mexican regulations.

US Regulations

CERCLA Hazardous Substance List (40 CFR 302.4): Not regulated.

SARA Title III

Section 302 Extremely Hazardous Substances (40 CFR 355, Appendix A): Not regulated.

Section 311/312 (40 CFR 370):

☒ Acute (Immediate) ☒ Chronic (Delayed) ☐ Fire ☐ Reactive ☐ Pressure Generating

Section 313 Toxic Release Inventory (40 CFR 372):

Chemical Name	CAS-No.	Reporting threshold for other users	Reporting threshold for manufacturing and processing
Aluminium oxide	1344-28-1	10000 lbs	25000 lbs

For reporting purposes: the De Minimis Concentration for a toxic chemical in a mixture is 0.1% for carcinogens as defined in 29 CFR 1910.1200(d)(4) or 1% for others.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

Not regulated.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3): Not regulated.

Drug Enforcement Act: Not regulated.

TSCA

TSCA Section 4(a) Final Test Rules & Testing Consent Orders: Not regulated.

TSCA Section 5(a)(2) Final Significant New Use Rules (SNURs) (40CFR 721, Subpt. E): Not regulated.

TSCA Section 5(e) PMN-Substance Consent Orders: Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated.

State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): Continuous filament glass fiber

Massachusetts Right-To-Know List: Aluminium oxide; Amorphous silica; Continuous filament glass fiber

Michigan Critical Materials List (Michigan Natural Resources and Environmental Protection Act (Act. 451 of 1994)): Not regulated.

Minnesota Hazardous Substances List: Aluminium oxide; Amorphous silica

New Jersey Right-To-Know List: Aluminium oxide; Amorphous silica; Continuous filament glass fiber

Pennsylvania Right-To-Know List: Aluminium oxide; Amorphous silica; Continuous filament glass fiber

Rhode Island Right-To-Know List: Aluminium oxide; Continuous filament glass fiber

16	OTHER INFORMATION
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HAZARD RATINGS

	Health Hazard	Fire Hazard	Instability	Special Hazard
NFPA	2	1	0	--

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

NFPA Label colored diamond code: Blue - Health; Red - Flammability; Yellow - Instability; White - Special Hazards

	Health Hazard	Flammability	Physical Hazard	Personal Protection
HMIS	2*	1	0	B

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe * - Chronic Health Effect

Personal Protection codes: B - Safety Glasses, Gloves

HMIS Label colored bar code: Blue - Health; Red - Flammability; Orange - Physical Hazards; White - Special

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Supercedes Date:

SDS No.: 1009055

Disclaimer: The information provided on this data sheet was abstracted from supplier material safety data sheets and standard references in occupational health and toxicology. Federal-Mogul makes no representation or warranty with respect to the information obtained from such references. The information is however, as of the date provided, true and accurate to the best of Federal-Mogul's knowledge, and should be used to make an independent determination of the methods to safeguard workers and the environment.