



MATERIAL SAFETY DATA SHEET

1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: ReflectShield 1435SA

Manufacturer Name:

Federal Mogul Corporation, Southfield
26555 Northwestern Highway
Southfield MI 48034

Emergency Telephone:

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

Non-emergency Telephone:

General Information: 248-354-9844

Intended Use: Industrial chemical

2 HAZARDS IDENTIFICATION

Emergency Overview

Physical State: Solid

Color: Silver

Odor: Odorless

Low hazard for usual industrial or commercial handling by trained personnel.

Under normal conditions of processing and use, exposure to the chemical constituents in this product is unlikely. 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.

Potential Health Effects

Inhalation: Dust or vapor may irritate the throat and respiratory system and cause coughing. Fumes from burning this material may cause respiratory irritation with coughing, difficulty in breathing or shortness of breath.

Eye Contact: Dust may irritate the eyes. Decomposition products may cause eye irritation.

Skin Contact: Prolonged skin contact may cause temporary irritation.

Ingestion: Not relevant, due to the form of the product.

Potential Physical / Chemical Effects: This product is not flammable.

OSHA Regulatory Status: When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

Environment: The environmental hazard of the product is considered to be limited.

3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration*
†GF-Fibre	None	67.5%
†Aluminum	7429-90-5	22.5%
Acrylic resin	None	10%

* 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: In case of inhalation of dusts or fumes from heated product: Move into fresh air and keep at rest. Get medical attention if any discomfort continues.

Eye Contact: Dust in the eyes: Flush eyes thoroughly with water, taking care to rinse under eyelids. If irritation persists, continue flushing for 15 minutes, rinsing from time to time under eyelids. If discomfort continues, consult a physician.

Skin Contact: Wash contact areas with soap and water. If irritation occurs, get medical assistance.

Ingestion: Not Applicable

5 FIRE-FIGHTING MEASURES

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

Unsuitable Extinguishing Media: Not applicable.

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

Unusual Fire & Explosion Hazards: By heating and fire, harmful vapors/gases may be formed.

Hazardous Combustion Products: Aluminum oxides, Carbon Dioxide, Carbon Monoxide, Nitrogen Oxides

Protective Measures: Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid dust formation. Wear necessary protective equipment. See Section 8 of the MSDS for Personal Protective Equipment.

Spill Cleanup Methods: Use a vacuum cleaner. If not possible, moisten dust with water before it is collected with shovel, broom or the like. Do not use compressed air when cleaning. For waste disposal, see section 13 of the MSDS.

Environmental Precautions: No specific precautions.

7 HANDLING AND STORAGE

Handling: The ingredients may be released from the product by operations such as overheating, burning, machining, abrading, or riveting. Use work methods which minimize dust production. Avoid inhalation of dust. Do not breathe fumes produced at elevated temperatures. Periodically clean work and storage areas to prevent dust accumulation. Observe good industrial hygiene practices.

Storage: Store in a dry place.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION**Exposure Limits:**

Chemical Name	Source	Type	Exposure Limits	Notes
Aluminum (Dust.)	ACGIH	TWA	10 mg/m ³	as metal dust
Aluminum (Respirable dust.)	US. OSHA Table Z-1	TWA	5 mg/m ³	as Al
Aluminum (Total dust.)	US. OSHA Table Z-1	TWA	15 mg/m ³	as Al
GF-Fibre (Fiber.)	ACGIH	TWA	0.2 fibers/cm ³	
GF-Fibre (Fiber.)	ACGIH	TWA	1 fibers/cm ³	
GF-Fibre (Inhalable fraction.)	ACGIH	TWA	5 mg/m ³	

Engineering Controls: If dust or fumes are generated during use, use local exhaust in combination with general ventilation as necessary to remove fumes/dust from the workers' breathing zone and to ensure exposures do not exceed applicable limits.

Respiratory Protection: During dust-raising work or inhalation of hot/molten material: Use a NIOSH-approved respirator (See 29 CFR 1910.134, respiratory protection standard).

Eye Protection: Use tight fitting goggles if dust is generated.

Hand Protection: Gloves are recommended for prolonged use.

Skin Protection: It is a good industrial hygiene practice to minimize skin contact.

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

Color: Silver

Odor: Odorless

Odor Threshold: Not applicable.

Physical State: Solid

pH: Not applicable

Melting Point: >200°C (392°F)

Freezing Point: No data available.

Boiling Point: Not applicable.

Flash Point: Not applicable.
Evaporation Rate: Not applicable.
Flammability (Solid): No data available.
Flammability Limit - Upper (%): Not applicable.
Flammability Limit - Lower (%): Not applicable.
Vapor Pressure: Not applicable.
Vapor Density (Air=1): Not applicable.
Specific Gravity: > 2
Solubility in Water: Insoluble
Solubility (Other): No data available.
Partition Coefficient (n-Octanol/water): Not applicable.
Autoignition Temperature: Not applicable.
Decomposition Temperature: >250°C (482°F)
Explosive Properties: No data available

10	STABILITY AND REACTIVITY
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Stability: Stable under normal temperature conditions and recommended use.

Conditions to Avoid: None under normal conditions.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition Products:

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

11	TOXICOLOGICAL INFORMATION
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Specified Substance(s)

Other Acute: Aluminium: May cause skin and eye irritation. May cause rashes or dermatitis. May affect the nervous system and cause headache, nausea, vomiting, and narcosis. GF-Fiber: May cause eye, skin and respiratory irritation. May cause skin rash, conjunctivitis, coughing, and sneezing.

Listed Carcinogens: None

Product Information

Other Acute: Dusts may irritate the respiratory tract, skin and eyes.

12	ECOLOGICAL INFORMATION
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Ecotoxicity: Not expected to be harmful to aquatic organisms.

Mobility: The product is non-volatile. The product is insoluble in water.

Persistence and Degradability: No data available

Bioaccumulation Potential: No data available on bioaccumulation.

13 DISPOSAL CONSIDERATIONS

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.

14 TRANSPORT INFORMATION

DOT Not Regulated

TDG Not Regulated

IATA Not Regulated

IMDG Not Regulated

15 REGULATORY INFORMATION

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: Does not meet the criteria for a controlled product.

Inventory Status

This product or all components are listed on the following inventory: TSCA

US Regulations

CERCLA Hazardous Substance List (40 CFR 302.4): None

SARA Title III

Section 302 Extremely Hazardous Substances (40 CFR 355, Appendix A): None

Section 313 Toxic Release Inventory (40 CFR 372):

Chemical Name	CAS-No.	Concentration
Aluminum (Fume or dust)	7429-90-5	22.5%

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): None

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3): None

Drug Enforcement Act: None

TSCA: No component is listed on TSCA Sections 4(a), 5(a)(2), 5(e) or 12(b).

State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): None

Massachusetts Right-To-Know List: Aluminum

Michigan Critical Materials List (Michigan Natural Resources and Environmental Protection Act (Act. 451 of 1994)): None

Minnesota Hazardous Substances List: Aluminum

New Jersey Right-To-Know List: Aluminum

Pennsylvania Right-To-Know List: Aluminum

Rhode Island Right-To-Know List: None

16	OTHER INFORMATION
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HAZARD RATINGS

	Health Hazard	Fire Hazard	Reactivity Hazard	Special Hazard
NFPA	0	0	0	0

	Health Hazard	Fire Hazard	Reactivity Hazard	Personal Protection
HMIS	0	0	0	E

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

E - Safety Glasses, Gloves & Dust Respirator

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SDS No.: 1003662

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