



MATERIAL SAFETY DATA SHEET

1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: Silicone Rubber 'Final'
Product No.: S-001, S-049, S-078, S-083

Manufacturer Name:
Federal Mogul Corporation, Indiana
2845 West State Road 28
Frankfort, Indiana 46041
Telephone Number: (765) 654-8761

Emergency Telephone:
Medical Emergency (24HR): 1-800-56 SPILL
(800-567-7455)
Transport ER Ph. (outside NA): 703-527-3887
(Accepts collect calls)

Intended Use: Silicone

Non-emergency Telephone:
General Information: 248-354-9844
Contact Person: Jeff Michael

2 HAZARDS IDENTIFICATION

Emergency Overview

Physical State: Solid rubber

Color: No data available.

Odor: Characteristic rubber

Low hazard for usual industrial or commercial handling by trained personnel. Rubber compounds generally do not pose a health hazard unless heated. Under normal conditions of processing and use, exposure to the chemical constituents in this product is unlikely. All ingredients are tightly bound in a polymeric matrix that has a negligible vapor pressure so there is a low potential for inhalation or ingestion of ingredients.

Potential Health Effects

Inhalation: Grinding and sanding this product may generate dust. Dust may irritate 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. Extremely high fume concentrations may reduce the ability of the blood to carry oxygen to the body or affect the lungs.

Eye Contact: Grinding and sanding this product may generate dust. Dust may irritate the eyes. Decomposition products may cause eye irritation. Contact with hot material can cause thermal burns which may result in permanent damage.

Skin Contact: Silicone rubber will not cause skin irritation; however, small amounts of additives and accelerators may irritate the skin with prolonged or repeated contact. Individuals sensitive to these ingredients may develop a rash (dermatitis). Contact with hot material can cause thermal burns which may result in permanent damage.

Ingestion: No adverse effects due to ingestion are expected.

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

OSHA Regulatory Status: Under some use conditions, this material may be considered to be 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
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Chemical Name	CAS-No.	Concentration*
Silicone polymer	-	99%
Polymer processing additive	-	< 1%

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

4	FIRST AID MEASURES
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General: For contact with hot polymer: Flush eyes with lukewarm water for at least 15 minutes. Immerse skin in cool water. DO NOT attempt to remove polymer from skin as this can cause further damage. Get immediate medical attention. Prompt medical attention is required if decomposition products are inhaled.

Inhalation: If fumes from heated product are inhaled: Move into fresh air and keep at rest. Move the exposed person to fresh air at once. For breathing difficulties oxygen may be necessary. If breathing stops, provide artificial respiration. Consult a physician for specific advice.

Eye Contact: 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: Remove contaminated clothing immediately and wash skin with soap and water. If irritation occurs, get medical assistance.

Ingestion: Rinse mouth thoroughly. Drink plenty of water. Get medical attention if symptoms occur.

5	FIRE-FIGHTING MEASURES
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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: The product is non-combustible. If heated, toxic vapors may be formed. Burning this material, or exposing it to temperatures above 300 °C may result in the release of irritating fumes. Additives present in small amounts may release toxic fumes.

Hazardous Combustion Products: Carbon Oxides, Hydrocarbons, Silicone 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 contact with eyes and prolonged skin contact. Wear necessary protective equipment. See Section 8 of the MSDS for Personal Protective Equipment.

Spill Cleanup Methods: Shovel up and place in a container for salvage or disposal. For waste disposal, see section 13 of the MSDS.

Environmental Precautions: No specific precautions.

7 HANDLING AND STORAGE

Handling: All handling to take place in well-ventilated area. Avoid inhalation of dust and contact with skin and eyes. 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 cool, dry place out of direct sunlight. Keep containers tightly closed to prevent moisture absorption and contamination.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits: No exposure limits noted for ingredient(s).

Engineering Controls: Provide adequate ventilation. 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: No protection is ordinarily required under normal conditions of use and with adequate ventilation. 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: If contact with hot material may occur, safety glasses and face shield are recommended.

Hand Protection: Gloves are recommended for prolonged use. When material is heated, wear gloves to protect against thermal burns.

Skin Protection: It is a good industrial hygiene practice to minimize skin contact. Thermally protective, chemical resistant apron and long sleeves are recommended when volume of hot material is significant.

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.

9 PHYSICAL AND CHEMICAL PROPERTIES

Color: No data available.

Odor: Characteristic rubber
Odor Threshold: No data available.
Physical State: Solid rubber
pH: Not applicable
Melting Point: No data available.
Freezing Point: Not applicable.
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: 1.1 - 1.2
Solubility in Water: Insoluble
Solubility (Other): Not applicable.
Partition Coefficient (n-Octanol/water): Not applicable.
Autoignition Temperature: No data available.
Decomposition Temperature: 300°C (572°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 known.

Incompatible Materials: In general, elastomers are incompatible with: Strong oxidizing agents. Reducing agents.

Hazardous Decomposition Products:

At Elevated Temperatures:	Aldehydes, Aliphatic Hydrocarbons, Aromatic Hydrocarbons, Carbon Dioxide, Carbon Monoxide, Formaldehyde, Silicon dioxide
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Possibility of Hazardous Reactions: Will not occur. The product is fully polymerized.

11	TOXICOLOGICAL INFORMATION
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General Information: Toxicity data for the product ingredients are not available. The evaluation is based on the toxicity of a similar product.

Listed Carcinogens: Fillers used in silicone polymers may contain more than 0.1% of a carcinogenic ingredient. These ingredients are bound within the rubber and release is not expected. The rubber industry is listed as an exposure circumstance that is known to be carcinogenic to humans (Group 1). IARC, NTP, or OSHA list some of the thermal decomposition products that may be produced at elevated temperatures as confirmed human carcinogens.

Product Information

Other Acute: The principal components used in this product have been reacted and are no longer present in their original form. The finished polymerized product is an inert rubber, and exposure to the original constituents would not be expected under normal conditions. Silicone rubbers in general are relatively biologically inert. Like most high-molecular weight polymers, this product is not known to exhibit any adverse acute or chronic health effects. Burning this material or exposing it to temperatures in excess of 300 °C can generate irritating and toxic fumes. Grinding and sanding this product may generate dust. Dusts may irritate the respiratory tract, skin and eyes. Dust inhalation can also inhibit the clearance of toxic particles from the lung by decreasing the mobility of alveolar macrophages. Repeated exposure to high concentrations of dust may adversely affect the lungs.

12	ECOLOGICAL INFORMATION
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Ecotoxicity: No data available.

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

Disposal Methods: No specific disposal method required.

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: Does not meet the criteria for a controlled product.

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 311/312 (40 CFR 370):** Acute (Immediate) Chronic (Delayed) Fire Reactive Pressure Generating**Section 313 Toxic Release Inventory (40 CFR 372):** None**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:** None**Michigan Critical Materials List (Michigan Natural Resources and Environmental Protection Act (Act. 451 of 1994)):** None**Minnesota Hazardous Substances List:** None**New Jersey Right-To-Know List:** None**Pennsylvania Right-To-Know List:** None**Rhode Island Right-To-Know List:** None**16 OTHER INFORMATION****HAZARD RATINGS**

	Health Hazard	Fire Hazard	Reactivity Hazard	Special Hazard
NFPA	1	1	0	--

	Health Hazard	Fire Hazard	Reactivity Hazard	Personal Protection
HMIS	1*	1	0	B

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

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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.