



MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: GS-5000, Glass Seal Powder Product Number: No.	Manufacturer: Federal Mogul Corporation 26555 Northwestern Highway Southfield, MI 48033 24hr Emerg # (Infotrac): 1-800-535-5053 International: 001-352-323-3500 Non-Emerg #: 248-354-9844
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SECTION 2: COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

Ingredient*	CAS No.:	% Weight	OSHA PEL	ACGIH TLV (2004)
Ammonium polyacrylate	9003-03-6	<2	None Established	None Established
Bentonite (Western)	1302-78-9	<4	10 mg/m ^{3a} (as respirable particulate)	3 mg/m ^{3b} (as respirable particulate)
Frit	65997-18-4	60-98	10 mg/m ^{3a} (as respirable particulate)	3 mg/m ^{3b} (as respirable particulate)
Lithium aluminosilicate	1302-66-5	<40	None Established	None Established
Lithium carbonate	554-13-2	<2	10 mg/m ^{3a} (as respirable particulate)	3 mg/m ^{3b} (as respirable particulate)
Silica (Crystalline quartz)	14808-60-7	<1	<u>10 mg/m³</u> (respirable fraction) % SiO ₂ + 2	0.05 mg/m ³ (respirable fraction) (A2)
Silica (Crystalline cristobalite)	14464-46-1	<1	<u>5 mg/m³</u> (respirable fraction) % SiO ₂ + 2	0.05 mg/m ³ (respirable fraction)
Silica (Crystalline tridymite)	15468-32-3	<1	<u>5 mg/m³</u> (respirable fraction) % SiO ₂ + 2	0.05 mg/m ³ (respirable fraction)

*: The products listed in Section 1 do not contain all of the ingredients listed above

^a: Milligrams of compound per cubic meter of sampled air, on a weight-to-volume basis

^b: ACGIH has rescinded the TLV for respirable particulate, but recommends that airborne concentrations be kept below 3 mg/m³ for respirable particles for which there is no specific standard.

A2: ACGIH has classified crystalline quartz as a suspected human carcinogen.

OSHA Regulatory Status: This product is classified as hazardous under OSHA regulations.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Shipped glass seal powders are not considered hazardous, but operations that can generate airborne dust should be avoided. Such operations could cause exposures in excess of permissible exposure limits for the respective ingredient and should be considered hazardous.

Prolonged or repeated exposure may cause lung injury, including silicosis. This product may contain crystalline silica. Crystalline silica has been classified by IARC as a known human carcinogen. Some human studies indicate potential for lung cancer from crystalline silica exposure. Risk of injury depends on duration and level of exposure. Long-term exposures that result in silicosis may result in additional health effects.

POTENTIAL HEALTH EFFECTS

Inhalation: Dust may cause irritation. Repeated inhalation of may affect a variety of organs (See Chronic Section below).

Skin: May cause irritation. Prolonged skin contact may cause dermatitis.

Eye: Dust may cause irritation and redness. Particles may scratch the eye.

Ingestion: Ingestion may cause irritation, nausea, vomiting, and diarrhea.

Chronic: Repeated inhalation of dust may cause fibrotic lung disease and increased risk of sinus and respiratory cancer.

Carcinogenicity:

	COMPONENT
	NTP
	IARC
	OSHA
Silica (Crystalline)	Yes
	1
	Yes
Aluminum polyacrylate, Bentonite, Frit, Lithium aluminosilicate, Lithium carbonate	No
	No
	No

Signs and Symptoms: Skin may become red and itchy with repeated contact. Gastrointestinal effects may result in nausea, abdominal pain, diarrhea, constipation, nausea and vomiting.

Medical Conditions Aggravated by Exposure: Overexposure may aggravate pre-existing skin, respiratory, kidney, blood, gastrointestinal and nervous system disorders.

Target Organs: Skin, eyes, lungs, and gastrointestinal system.

Symptoms and Effects of Exposure to Selected Individual Components

AMMONIUM POLYACRYLATE

Inhalation hazards – Breathing vapors may cause respiratory tract irritation.

Other hazards –Contact may cause skin and eye irritation.

BENTONITE (WESTERN)

Inhalation hazards – Overexposure may result in temporary mucous membrane irritation, coughing, sneezing, shortness of breath or respiratory tract irritation.

Other hazards – Ingestion is not recommended, but adverse effects have not been reported. Dust may irritate eyes.

FRIT, CHEMICAL

Inhalation hazards –High dust levels can be irritating to the respiratory tract.

Other hazards – Prolonged contact with frit dust may be irritation to the eyes and/or skin.

LITHIUM ALUMINOSILICATE

Inhalation hazards – Breathing vapors may cause respiratory tract irritation.

Other hazards –Contact may cause skin and eye irritation.

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LITHIUM CARBONATE

Lithium carbonate has low toxicity and may produce moderate irritation.

Inhalation hazards – Breathing dust may cause respiratory tract irritation.

Other hazards –Contact may cause skin and eye irritation. Chronic skin exposure may cause dermatitis.

Symptoms and Effects of Exposure to Selected Individual Components (continued)

SILICA DUST

Inhalation hazards – Acute: Exposure to silica dust may cause paroxysmal coughing, wheezing, dyspnea and upper respiratory tract irritation. Chronic: Prolonged exposure to silica dust may cause silicosis. Crystalline silica has been classified by IARC as, Group 1, carcinogenic to humans. ACGIH classifies crystalline quartz as A2, suspected human carcinogen.

Other hazards – Eye or skin contact can cause temporary discomfort and irritation.

SECTION 4: FIRST AID MEASURES

Ingestion: Do not induce vomiting. Seek medical attention.
Inhalation: Move to fresh air. Seek medical attention.
Eye Contact: Flush with water to remove particulate. Seek medical attention.
Skin Contact: Wash thoroughly with soap and water. If persistent irritation develops, seek medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Flashpoint: N/A **LEL:** N/A **UEL:** N/A **Autoignition Temperature:** This product is inherently flame resistant, but may ignite at temperatures exceeding 1,112°F (600°C) in an oxygen-enriched atmosphere.

Extinguishing Media: Use media suitable for surrounding fire.

Unusual Fire and Explosion Hazards: None

Special Fire Fighting Procedures: Heating to a very high temperature may result in toxic decomposition products (See Section 10).

SECTION 6: ACCIDENTAL RELEASE MEASURES

If a release of dust occurs during use, remove dust by vacuuming or wet mopping. Vacuums used for this purpose should be equipped with HEPA filters. Do not use compressed air to blow dust in the workplace.

SECTION 7: HANDLING AND STORAGE

Store in a dry place. Shipping and storage may result in accumulation of dust near shipping containers. Remove dust by vacuuming or wet mopping. Vacuums used for this purpose should be equipped with HEPA filters. Do not use compressed air to blow dust from storage containers.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation Protection: Any operation that may produce dusty conditions should be adequately exhausted to prevent inhalation of dust.

Respiratory Protection: Use a NIOSH-approved respirator if there is a potential for exposure to dust exceeding PELs or TLVs. (See 29 CFR 1910.134, respiratory protection standard).

Skin Protection: If skin irritation occurs, gloves and other protective garments may be worn.

Eyes: Safety glasses or goggles are recommended.

Other: Eating, drinking, and smoking should not be permitted in the work area. Employees should wash thoroughly before eating, drinking, smoking, or applying cosmetics.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	N/A	Vapor Pressure:	N/A
Melting Point:	N/A	Vapor Density (air = 1):	N/A
pH:	N/A	% Volatile:	N/A
Specific Gravity:	Unknown	Evaporation Rate:	N/A
Water Solubility:	Unknown	Appearance and Odor:	Odorless powder

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable at normal temperatures and storage conditions.

Incompatibility (Materials/Conditions to Avoid): None.

Hazardous Polymerization: Will not polymerize.

Decomposition Products: Oxides of carbon, nitrogen and sulfur; hydrocarbons; ammonia; and trace levels of other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

Inhalation: Refer to Section 3

Skin: Refer to Section 3

Eye: Refer to Section 3

Ingestion: Refer to Section 3

Acute: Skin and eye irritation may occur with repeated contact to dust.

Chronic: If dust is generated, some of the ingredients can have acute and chronic effects (See Section 3 for details).

SECTION 12: ECOLOGICAL INFORMATION

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Federal and state law regulates disposal of solid waste. Waste should be placed in airtight containers. Disposal must be in accordance with 49CFR261, 40CFR262, and applicable state and local regulations

SECTION 14: TRANSPORTATION INFORMATION

Proper Shipping Name:	Not regulated
Hazard Class:	None
Identification Number:	None
Packing Group:	N/A
Shipping Label:	None
Additional Marking Requirement:	None

SECTION 15: REGULATORY INFORMATION

U.S. TSCA: The chemicals used to manufacture this product are listed on the U.S. Toxic Substances Control Act (TSCA) Inventory.

California Proposition 65: This product contains ingredients known to the State of California to cause cancer, birth defects or other reproductive effects.

SARA Title III – Section 313 Supplier Notification: This product does not contain chemicals subject to SARA Title III/CERCLA “reportable quantities” (RQs) and/or “threshold planning quantities” (TPQs) and/or are classified as “Toxic Chemicals” under the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372.

RCRA Hazardous Waste Code: Not Available

CERCLA Hazardous Substances: Not Available

OSHA: Not Available

WHMIS Classification: Not Available

SECTION 16: OTHER INFORMATION**Abbreviations:**

CAS #:	Chemical Abstract Service Number
OSHA PEL:	U.S. Occupational Safety and Health Administration Permissible Exposure Limit
ACGIH TLV:	American Conference of Governmental Industrial Hygienists Threshold Limit Value (2004)
mg/m ³ :	Milligrams of contaminant per cubic meter of sampled air, on a weight-to-volume basis
N/A:	Not Applicable
NIOSH	National Institute for Occupational Safety and Health
IARC:	International Agency for Research on Cancer
NTP:	National Toxicology Program
HEPA:	High-efficiency particulate air

This product does not contain any deliberate addition of asbestos.

The information provided on this data sheet was abstracted from a supplier MSDS 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 provided is, however, as of the date below, true and accurate to the best of Federal-Mogul's knowledge.