

MATERIAL SAFETY DATA SHEET

1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: SBR Rubber 'Final'

Intended Use: Rubber

2 HAZARDS IDENTIFICATION

Emergency Overview

Physical State: Solid rubber

Color: Black

Odor: Characteristic rubber

ATTENTION!

Possible cancer hazard - may cause cancer based on animal data. 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. Skin (dermal) contact is possible.

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: Prolonged or repeated skin contact may cause irritation. Individuals sensitive to small amounts of curing agents present 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.

Chronic Health Effects: Possible human cancer hazard.

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. When used for its intended purpose, this material is classified as hazardous in accordance with OSHA 29CFR 1910.1200.

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

3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration*
Polymers: polybutadiene &/or styrene-butadiene	9003-55-8	< 70%
†Kaolin	1332-58-7	< 12%
†Sodium alumino silicate	1344-00-9	< 12%
†Zinc oxide	1314-13-2	< 2%
†Carbon black	1333-86-4	> 1%

* 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

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 symptomatic, move to fresh air. If fumes from heated product are inhaled: Move into fresh air and keep at rest. Get medical attention if symptoms persist. 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: 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: 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

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. Additives present in small amounts may release toxic fumes.

Hazardous Combustion Products: Butadiene, Carbon Dioxide, Carbon Monoxide, Styrene

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

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid prolonged or repeated contact with skin. 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. Wear protective gloves and appropriate clothing to prevent skin contact. 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:

Chemical Name	Source	Type	Exposure Limits	Notes
Carbon black	ACGIH	TWA	3.5 mg/m ³	
Carbon black	NIOSH Guide	Concentration	1750 mg/m ³	
Carbon black	US. OSHA Table Z-1	TWA	3.5 mg/m ³	
Kaolin (Respirable fraction.)	ACGIH	TWA	2 mg/m ³	
Kaolin (Respirable fraction.)	OSHA Z3	TWA	15 Mppcf 5 mg/m ³	
Kaolin (Total dust.)	OSHA Z3	TWA	50 Mppcf 15 mg/m ³	
Kaolin (Respirable fraction.)	US. OSHA Table Z-1	TWA	5 mg/m ³	
Kaolin (Total dust.)	US. OSHA Table Z-1	TWA	15 mg/m ³	
Sodium alumino silicate	ACGIH	TWA	2 mg/m ³	as Al
Zinc oxide (Respirable fraction.)	ACGIH	STEL	10 mg/m ³	
Zinc oxide (Respirable fraction.)	ACGIH	TWA	2 mg/m ³	
Zinc oxide	NIOSH Guide	Concentration	500 mg/m ³	
Zinc oxide (Respirable	OSHA Z3	TWA	15 Mppcf 5 mg/m ³	

fraction.)				
Zinc oxide (Total dust.)	OSHA Z3	TWA	50 Mppcf 15 mg/m ³	
Zinc oxide (Fume.)	US. OSHA Table Z-1	TWA	5 mg/m ³	
Zinc oxide (Respirable fraction.)	US. OSHA Table Z-1	TWA	5 mg/m ³	

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. 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. During dust-raising work or inhalation of hot/molten material: Respirator type: High-efficiency particulate respirator. 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.

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PHYSICAL AND CHEMICAL PROPERTIES

Color: Black

Odor: Characteristic rubber

Odor Threshold: No data available.

Physical State: Solid rubber

pH: Not applicable

Melting Point: No data available.

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: 1.1 - 1.2

Solubility in Water: Insoluble

Solubility (Other): No data available.

Partition Coefficient (n-Octanol/water): Not applicable.

Autoignition Temperature: Not applicable.

Decomposition Temperature: No data available.

Explosive Properties: No data available

10 STABILITY AND REACTIVITY

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:	Ammonia, Butadiene, Carbon Dioxide, Carbon Monoxide, Carbon disulfide, Dibutylamine, Diethylamine, Dimethylamine, Hydrogen Sulfide, Styrene, Sulfur Oxides, Toluene
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Possibility of Hazardous Reactions: Will not occur. The product is fully polymerized.

11 TOXICOLOGICAL INFORMATION

Specified Substance(s)

Acute Toxicity:

Component Chemical Name	Test Results
Carbon black	Dermal LD50 (Rabbit): > 3000 mg/kg
Carbon black	Oral LD50 (Rat): > 15400 mg/kg
Sodium aluminosilicate	Oral LD50 (Rat): > 27000 mg/kg

Listed Carcinogens: Carbon black has caused cancer in experimental animals. The rubber industry is listed as an exposure circumstance that is known to be carcinogenic to humans (Group 1). Fillers used in silicone polymers may contain more than 0.1% of a carcinogenic ingredient.

Chemical Name	IARC	NTP	OSHA	ACGIH
Carbon black	2B	Not Listed	Not Listed	Not Listed

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

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.

Chronic Toxicity: Possible cancer hazard - may cause cancer based on animal data.

12 ECOLOGICAL INFORMATION

Ecotoxicity: Acute aquatic toxicity information.

Specified Substance(s)

Chemical Name	Test
Carbon black	EC50 (24 hour(s), Daphnia magna): >5600 mg/l
Carbon black	EC50 (72 hour(s), Green Alga): >10000 mg/l
Carbon black	LC50 (96 hour(s), Zebra Fish): >1000 mg/l

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: No specific disposal method required.

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

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: D2A

Mexican Dangerous Statement: This is a Mexican "dangerous" 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):

Chemical Name	CAS-No.	Concentration
Zinc oxide	1314-13-2	< 2%

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): Carbon black

Massachusetts Right-To-Know List: Carbon black; Kaolin; Zinc oxide

Michigan Critical Materials List (Michigan Natural Resources and Environmental Protection Act (Act. 451 of 1994)): Zinc oxide

Minnesota Hazardous Substances List: Carbon black; Kaolin; Sodium alumino silicate; Zinc oxide

New Jersey Right-To-Know List: Carbon black; Zinc oxide

Pennsylvania Right-To-Know List: Carbon black; Kaolin; Sodium alumino silicate; Zinc oxide

Rhode Island Right-To-Know List: Carbon black; Kaolin; Zinc oxide

16	OTHER INFORMATION
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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

B - Safety Glasses & Gloves

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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.



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