

Safety Data Sheet

Section 1: Identification

Product Name: EFG- Engineered Elastomers

Batch Product Code EFG- All Series

Recommended use Manufacture of rubber products and as polymer modifier for roofing and paving asphalt.

Manufacturer: EFG Rubber BCT
LLC 1950 FM 3057
Bay City TX 77414

Telephone (General) 806-503-4123

Emergency telephone number

Manufacturer: 806-503-4123 Plant Office
480-833-6541 Corporate Office

Section 2: Hazard Identification

Hazard Overview

Physical State: Free flowing Elastomer

Color: Black

Odor: Rubber like smell (mild)

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/sanding this product may generate dust. Dust may irritate throat & respiratory system. Lower concentrations of fumes from burning this material may cause respiratory irritation with coughing, difficulty in breathing, or shortness of breath. High concentrations may cause severe irritation, pulmonary edema (body fluid in the lungs) with coughing, wheezing, & abnormal lung sounds. Symptoms may progress to severe shortness of breath, central nervous system effects, & collapse. Symptoms may be delayed & worsen.

Eye Contact: Grinding/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.

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. Carbon black has caused cancer in experimental animals. These ingredients are bound within the rubber and release is not expected.

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

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

Environment: The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

Hazard statements: Keep away from heat, sparks, open flames and/or hot surfaces. No smoking. - P210

Section 3 - Composition/Information on Ingredients

Chemical Name	CAS-No.	Concentration*
†Carbon black	1333-86-4	< 31%
Natural Rubber	9006-04-6	< 55%
SBR-Styrene/Butadiene Copolymer	26471-45-4	< 55%
Hydrotreated Heavy Naphthenic Oil	64742-52-5	< 12%
Tall Oil Fatty Acids	61790-12-3	< 10%
Tall Oil Pitch	8016-81-7	< 10%
†Zinc oxide	1314-13-2	< 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.

Section 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 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: 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.

Section 5: Fire-Fighting Measures

Extinguishing Media: This product is not flammable at temperatures <250C. Use fire-extinguishing media appropriate for surrounding materials. Water, dry chemical or foam fire suppression products are suitable.

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.

Hazardous Combustion Products: Alcohols, Carbon Dioxide, Carbon Monoxide, Hydrocarbons

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

Section 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.

Section 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 & contamination.

Section 8 – Exposure Controls/Personal Protection

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.

Section 9 - Physical and Chemical Properties

Color: Black

Odor: Rubber like smell (mild). **Odor Threshold:** No data available.

Physical State: Free flowing Elastomer

Melting Point: N/A **Freezing Point:** N/A **Boiling Point:** N/A **Flash Point:** N/A **Evaporation Rate:** N/A

Flammability (Solid): No data available. **Flammability Limit - Upper (%):** Not applicable.

Flammability Limit - Lower (%): Not applicable.

Specific Gravity: 1.14-1.18

Solubility in Water: Insoluble

Autoignition Temperature: N/A **Decomposition Temperature:** No data available.

Section 10 – Stability & Reactivity

Stability: Stable under normal temperature conditions and recommended use.

Conditions to Avoid: Oxidizing agents

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

Hazardous Decomposition Products: At Elevated Temperatures: Alcohols, Carbon Dioxide, Carbon Monoxide, & Hydrocarbons.

Possibility of Hazardous Reactions: Will not occur. The product is polymerized.

Section 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

Listed Carcinogens: The rubber industry is listed as an exposure circumstance that is known to be carcinogenic to humans (Group 1). Carbon black: Certain carbon blacks have proved carcinogenic in animal studies. Inhalation animal studies of high concentrations resulted in chronic inflammation, lung fibrosis and lung tumors. Epidemiology studies of workers include findings of bronchitis, pneumonia, emphysema and excess cancer. Substances bound in a polymer or other matrix should present little or no hazard.

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. 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 fumes. The type of compounds generated depends upon temperature & conditions. Health effects from these fumes can range from transient to severe eye, skin & respiratory irritation, pulmonary edema, headache, nausea, drowsiness as well as a variety of other effects. Some decomposition products are hazardous if absorbed through the skin in sufficient quantities.

Grinding/sanding this product may generate dust. Dusts may irritate the respiratory tract, skin & eyes. Repeated exposure to high concentrations of dust may adversely affect the lungs. Dust inhalation can also inhibit the clearance of particles from the lung by decreasing the mobility of alveolar macrophages.

Section 12 – Ecological Information

Ecotoxicity: The product contains a substance which is toxic to aquatic organisms and which may cause long- term adverse effects in the aquatic environment.

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.

Section 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.

Section 14 - Transport Information

DOT Not Regulated

TDG Not Regulated

IATA Not Regulated

IMDG Not Regulated

Section 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.

Inventory Status: All ingredients are either listed or exempt from listing on EINECS, DSL or 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 311/312 (40 CFR 370):

Acute (Immediate) X Chronic (Delayed) Fire Reactive Pressure Generating

Section 313 Toxic Release Inventory (40 CFR 372):

Chemical Name	CAS-No.	Concentration
Zinc oxide	1314-13-2	< 3%

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; Zinc oxide

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

Minnesota Hazardous Substances List: Carbon black; Zinc oxide

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

Pennsylvania Right-To-Know List: Carbon black; Zinc oxide

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

RA, WHMIS: Not classified

Section 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 B - Safety Glasses & Gloves

Disclaimer: The information provided on this data sheet was abstracted from supplier material safety data sheets and standard references in occupational health and toxicology. EFG Polymers LLC 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 EFG Polymers LLC's knowledge, and should be used to make an Independent determination of the methods to safeguard workers and the environment.