

Material Safety Data Sheet

Carbomix Black Masterbatch

1. GENERAL INFORMATION

Chemical Name:	Styrene-Butadiene rubber, Aromatic Oil-Extended, Black Masterbatch
CAS Number:	NA/mixture (see Section 2)
CAS Name (Rubber only):	1,3-Butadiene polymer with Ethenylbenzene
Applicable Grades:	1622, 3650, 3651
Product Use:	Rubber articles and rubber modified articles
Prepared by:	Environmental and Safety Services
Telephone No.:	(504) 355-5655
Manufactured by:	DSM Copolymer, Inc.
Street Address:	5955 Scenic Highway, Baton Rouge, LA 70805
Mailing Address:	P. O. Box 2591, Baton Rouge, LA 70821
Date prepared:	June 21, 1993
Supersedes:	CR 2255(R 9/90)

2. CHEMICAL COMPOSITION

Ingredient	CAS #	Wt. % Maximum	Hazard Classification
Styrene-Butadiene Rubber	9003-55-8	62	NH
Disproportionated Tall Oil	61790-12-3/8052-10-6	6	(see Section 3)
Aromatic Petroleum Oil	64742-04-7	8	Carcinogen by IARC
Carbon Black	1333-86-4	34	Hazardous by OSHA
Aluminum Silicate(a)	22708-90-3	6	Hazardous by OSHA (a) Type 3650 only

3. FIRE AND EXPLOSION HAZARD DATA

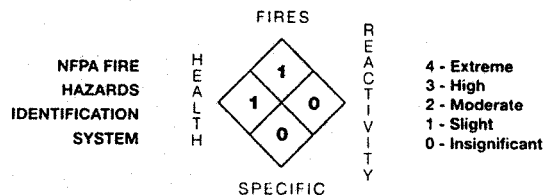
Flash Point Method:	NE, 210 °C (440 °F) COC for oil see note 1
Auto Ignition Temperature:	Above 388 °C (730 °F)
Ignition Temperature:	Above 210 °C (410 °F)
Combustible:	Yes, with the presence of an ignition system.
Upper/Lower Flammable Limits:	NA
Hazardous Combustion Products:	Carbon monoxide, carbon dioxide, products from incomplete combustion, oxides of nitrogen and sulfur, acrid fumes and toxic gases.
Extinguishing Media:	Most fire extinguishing media permitted - water recommended; carbon dioxide not recommended.
Special Fire Fighting Procedure:	Treat as hydrocarbon fire. Wear NIOSH approved self contained breathing apparatus with full face shield. Personnel not having suitable respiratory protection should leave the area to prevent exposure to toxic combustion gases.
Upper/Lower Explosive Level:	NA
Sensitivity to Impact/Shock:	NA
Sensitivity to Static Discharge:	NA

MARKETED BY
**HARWICK STANDARD
DISTRIBUTION CORPORATION**
60 S. Seiberling Street - Akron, Ohio 44305
Akron • Chicago • Northeast • Southern • West Coast

60 S

305

(Continued on reverse.)



4. PHYSICAL DATA

Physical State: Solid, bales(1622, 3651); particulate (3650)
 Appearance: Black, with grey bale coating; grey particles
 Odor: None
 Odor Threshold: NE
 Melting/Freezing Points: NA
 Specific Gravity: 1.10-1.15
 Boiling Point: NA
 Vapor Pressure: NA
 Vapor Density: NA
 Volatiles (% by weight, @ 100 °C): 0.75 max
 Solubility in Water at 20 °C: Insoluble
 Coefficient of Water/Oil Distribution: NE
 pH: NA
 Evaporation rate: NA

5. SPECIAL REGULATORY HAZARD-HEALTH, SAFETY, AND FOOD

OSHA: Aromatic Petroleum Oil, a component in this product, is carcinogenic according to Hazard Communication Standard, 29 CFR 1910.1200 (see Note 2). Carbon Black and aluminum silicate are considered a nuisance dust hazard by 29 CFR 1910.1000 Subpart Z-1 (see Note 3).
 TSCA: Components of this product are listed under TSCA Chemical Substance Inventory.
 FDA: Not approved for food or direct food contact.
 DOT: **United States:** Designation and labeling not applicable as product is not defined or designated as a hazardous material by U.S. Department of Transportation under Title 49 of CFR.

Canada: This product is not regulated under the Canadian Transportation of Dangerous Goods Regulations.

SARA Title III: **Section 302/304:** Extremely Hazardous Substances - None.

Section 311: Hazardous Substances - Not Applicable.

WHMIS: **Section 313:** This product is not subject to reporting requirements (See 40 CFR372).

This product is considered a Controlled Product under Canada's Workplace Hazardous Material Information System because it contains 1.0-2.0 weight percent Oleic acid, CAS No. 112-80-1 (a component in the Disproportionated Tall Oil) Carbon Black, and Aromatic Petroleum Oil.

	LD50	LC50	Hazard
Oleic acid	74gm/kg (rat, oral)	Unknown	Skin irritant
Aromatic Oil	5-15 gm/kg (rat, oral)	Unknown	Carcinogen
Carbon Black	Unknown	Unknown	Nuisance dust

CEPA: Components of this product are included in Canada's DSL.

EEC: Aromatic Petroleum Oils are considered carcinogenic by European Economic Community.

6. TOXICOLOGICAL AND HEALTH DATA

Specific Hazards: No acute hazards or effects are known. The Aromatic Petroleum Oil component in this product has been shown to produce skin tumors in laboratory animals (See Note 4).

Medical Conditions

Aggravated by Exposure:

Some individuals with specific sensitivities may exhibit eye, nose, throat or thermal irritation with prolonged exposure to processing fumes or vapors. Individuals with pre-existing skin disorders should avoid contact with this material.

Routes of Exposure:

Eye Contact: Not a probable source of exposure. Particulates may scratch eye surface or cause irritation.

Skin Contact: A single prolonged exposure is not likely to result in material being absorbed through the skin in a harmful amount. Repeated prolonged exposures may cause skin irritation and increase the risk of skin cancer. Exposure to hot material may cause thermal burns.

Ingestion: Not a probable route of exposure.

Inhalation: Not a probable source of exposure under conditions of normal use. Hot fumes or vapors which may form during processing can cause irritation to the respiratory tract.

Toxicology Information:

LD50 = NE; LC50 = NA

Reproductive Effects: None reported

Teratogenicity: None reported

Mutagenicity: None reported

Carcinogenicity: The Aromatic Petroleum Oil component in this product is a carcinogen according to IARC (see Note 4).

Others: Skin Irritant: Oleic acid - 15mg/3D-I (human) Moderate

Aromatic Petroleum Oil - 3.5/8.0 (rabbit) Moderate

7. PROTECTIVE AND PREVENTIVE MEASURES

Personal Protective Equipment: **Eye:** Wear safety glasses or chemical type goggles.
Skin: Wear clothing appropriate to prevent skin contact. Use gloves resistant to chemicals and petroleum distillates. Where contact may occur with hot material, wear thermal resistant gloves, arm protection, and a face shield. Launder or dry clean clothing when soiled.
Respiratory: Not normally required at ambient temperatures. If processing in area where ventilation is inadequate, wear a NIOSH approved organic vapor respirator with mechanical filtration. If processing conditions generate dust above PEL, wear NIOSH approved respirator for nuisance dust.

Handling Procedures and Equipment: Avoid skin and eye contact, practice good personal hygiene. Avoid inhalation of fumes or vapors from hot rubbers, compounds, and vulcanizates. Avoid generation of and prolonged breathing of dust.

Engineering Controls: Local exhaust ventilation is recommended during all hot processing operations.

Exposure Guidelines:

	PEL (OSHA)	TLV (ACGIH)
Aromatic Petroleum Oil as Oil Mist	5 mg/m ³	5 mg/m ³
PPAH & CTPV (see Note 5)	0.2 mg/m ³	0.2 mg/m ³
Carbon Black	3.5 mg/m ³	3.5 mg/m ³
Aluminum Silicate	5mg/m ³	5mg/m ³

8. EMERGENCY AND FIRST AID PROCEDURES

Eye Contact: Remove as for any foreign object. Flush with clean water for 15 minutes. Obtain medical attention if irritation persists.

Skin Contact: Wash with soap and water. Remove contaminated clothing. If thermal irritation, flush affected area with cold water to dissipate heat, then cover with clean cotton sheeting or gauze and get prompt medical attention.

Inhalation: If dust, fumes or vapors are inhaled, move to fresh air, aid breathing if necessary. Obtain medical attention if irritation persists.

Ingestion: Unlikely to occur.

9. CHEMICAL REACTIVITY

Chemical Stability: Product is stable at ambient temperature and pressure.

Conditions to Avoid: Ignition source; product is combustible.

Incompatibility with Other Materials: None known.

Hazardous Decomposition Products: Combustion products will be carbon monoxide, carbon dioxide, combustion products of nitrogen and sulfur and products from incomplete combustion.

Hazardous Polymerization: Will not occur.

10. SPILLS, DISPOSAL, STORAGE GUIDELINES

Spill and Release Information: Repackage uncontaminated rubbers. Reuse or dispose of as noted below if contaminated.

Disposal Information: Reuse if possible. Dispose in accordance with local, state and federal regulations and applicable environmental regulations. Material as supplied is not characterized as hazardous under RCRA.

Storage: Store at ambient temperature, keep away from excessive heat and flames and store in absence of direct, natural, or artificial light.

11. LABELS

OSHA: Required

WHMIS: Required

12. ADDITIONAL INFORMATION

Note 1: This data represents the lowest possible limit and is for the Aromatic Petroleum Oil ingredient in this product. The Aromatic Petroleum Oil is soluble in the SBR component and data on the blend has not been established.

Note 2: OSHA 29 CFR 1910.1200 and WHMIS (Canada) and many U.S. state 'Right-to-Know' legislation consider products containing 0.1% by weight or more of an ingredient known to be carcinogenic as a carcinogen, if no test data on the mixture is available.

Note 3: Carbon Black, when incorporated into the rubber in the form delivered, is no longer believed to be a nuisance dust hazard by DSM Copolymer. Aluminum Silicate may pose a nuisance dust hazard during processing.

Note 4: Aromatic Petroleum Oils have caused skin tumors in laboratory animals according to reports of IARC. They contain polynuclear aromatic substances which have caused cancer in laboratory animals. It is not known whether or not the repeated, prolonged skin contact of this rubber containing the Aromatic Petroleum Oil presents a skin cancer risk to humans.

DSM Elastomers

Note 5: Specific exposure standards for this product and its components have not been established. The limits shown in Section 7 are suggested as minimum control guidelines. The standards for particulate polycyclic aromatic hydrocarbon (PPAH) and coal tar pitch volatiles (CTPV) as benzene solubles are based upon coal coking and not upon the specific petroleum extract oil. These exposure limits apply only if aerosols are emitted from this product.

Abbreviations:

ACGIH: American Conference of Governmental Industrial Hygienists
 CAS: Chemical Abstract Service
 CEPA: Canadian Environmental Protection Act
 CFR: Code of Federal Regulations
 DOT: Department of Transportation
 DSL: Domestic Substance List
 EEC: European Economic Community
 EPA: Environmental Protection Agency
 FDA: Food and Drug Administration (U.S.)
 IARC: International Agency for Research on Cancer
 LC50: The concentration in air that causes death in 50% of the animals exposed
 LD50: The dose that causes death in 50% of the animals exposed
 mg/m³: Milligrams (mg) of substance per cubic meter (m³) of air; method of expressing the concentration of a substance in air
 NA: Not applicable
 NE: Not established
 NH: Not hazardous
 NFPA: National Fire Protection Association
 NIOSH: National Institute for Occupational Safety and Health
 OSHA: Occupational Safety and Health Administration
 PEL: Permissible Exposure Limits
 RCRA: Resource and Conservation Recovery Act
 SARA: Superfund Amendments and Reauthorization Act
 TLV: Threshold Limit Value
 TSCA: Toxic Substance Control Act
 WHMIS: Workplace Hazardous Material Information System

North and South America

DSM Copolymer, Inc.
P.O. Box 2591
Baton Rouge, LA, USA 70821-2591

Tel. (504) 355-5655
Toll free: (800) 535-9960
Fax: (504) 267-3631

Customer Applications Development Center
Tech-Line: (800) 824-0357
Fax: (504) 267-3630

Europe

DSM Elastomers Europe B.V.
The Netherlands (Sittard)
Tel. +31 (0) 46 77 36 67

Japan

DSM Idemitsu Co., Ltd.
Japan (Tokyo)
Tel. (81) 3-435-7110

Far East

DSM Elastomers Asia Pacific Pte. Ltd.
Singapore
Tel. (65) 299-6080

Notice: Although the information contained in this MSDS is believed to be correct as of the date hereof, DSM Copolymer makes no representations as to the completeness or accuracy thereof. Those who utilize the product described herein are responsible for determining (a) the suitability of the product for the intended use and (b) the appropriate manner of processing the product to ensure safety and quality. In no event will DSM Copolymer be responsible for damages of any nature resulting from the use of or reliance upon the information contained herein.

© DSM Copolymer, Inc.
Printed in the USA
Edition 09/93



DSM COPOLYMER