SECTION 1: PRODUCT IDENTIFICATION

Product Type:  
Product Names:  SBR oil-extended with naphthenic-type oil- Includes products: Duradene 750B, Duradene 751B, Stereon 763B, and others.
Chemical Name / Synonym:  Poly(butadiene-co-styrene), oil-extended with a naphthenic-type oil; SBR, oil-extended with a naphthenic-type oil.
Chemical Family:  Butadiene/styrene copolymers, oil-extended with naphthenic-type oil.
Uses:  For tire components and extruded and molded rubber goods applications.

24-Hour Emergency Phone:  
Non-emergency Information:  Chemtrec (U.S.A.):  800-424-9300
Chemtrec (International):  703-527-3887 (call collect
Amy Ciesielczyk:  330-379-7867 (U.S.A.) or aciesielczyk@firestonepolymers.com
Manufacturer's Name:  Firestone Polymers
Manufacturer's Address:  381 W. Wilbeth Rd. Akron, OH  44301 (U.S.A.)
REACH-Only Representative  BIG – Brandweerinformatiecentrum Gevaarlijke
Stoffen Technische Schoolstraat 43a
B-2440 Geel Belgium
Tel:  +32[0]14/58 45 47  Fax:  +32[0]14/58 35 16
e-mail:  info@big.be

SECTION 2: HAZARD IDENTIFICATION

NFPA Hazard Rating:  Health-0 / Flammability-1 / Reactivity-0
HMIS Hazard Rating:  Health-0 / Flammability-1 / Reactivity-0
OSHA Hazardous:  No
Primary Route of Exposure:  Skin Contact
Signs and Symptoms of Exposure:  Skin Contact- slight skin irritant; inhalation (high temperatures only)-mild respiratory irritant
Medical Conditions Aggravated by Exposure:  Skin and respiratory disorders
Chronic Effects:  (For the oil) – Prolonged and repeated contact may result in dryness or cracking of the skin.
Carcinogenicity:  None.  (For the oil)- Meets EU requirement of less than 3% (w/w) DMSO extract for total polycyclic aromatic compound (PAC) using IP 346.  The oil gives negative mutagenic results from Modified Ames Assay testing (ASTM E 1687).  NTP and OSHA do not list this product as a potential carcinogen.  Based on OSHA 1910.1200 and IARC study requirements, this product does not require labeling.
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name:</th>
<th>Common Name:</th>
<th>CAS #:</th>
<th>% (by wt)</th>
<th>Hazard Symbol/EC No.</th>
<th>Risk Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly(Butadiene-co-styrene)</td>
<td>SBR</td>
<td>9003-55-8</td>
<td>70.0-87.5%</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Hydrocarbon Mixture with carbon numbers &gt;C-20 and boiling above 640ºF. Hydrocarbon mixture contains the following:</td>
<td>Oil</td>
<td>See below.</td>
<td>11.8-28.8</td>
<td>265-155-0</td>
<td>None</td>
</tr>
<tr>
<td>Bitumenous Ingredients</td>
<td>8052-42-4</td>
<td>5-15</td>
<td>232-490-9</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Heavy Naphthenic Process Oil</td>
<td>64742-52-5</td>
<td>85-95</td>
<td>265-155-0</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

First Aid Procedures:
- Eye Contact – Flush with water. If irritation occurs, seek medical attention.
- Skin Contact – Wash affected areas with soap and water. If irritation occurs, seek medical attention.
- Ingestion – DO NOT induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested; seek medical advice.
- Inhalation – Move victim to fresh air. If breathing is difficult, give oxygen. Seek medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media:
- Water or foam; dirt or sand; dry chemical

Hazardous Combustion Products:
- Oxides of carbon

Recommended Fire Fighting Procedures:
- Use self-contained breathing apparatus.

Unusual Fire and Explosion Hazards:
- None

SECTION 6: ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled:
- A release or spill of this material would not constitute a safety hazard.

SECTION 7: HANDLING AND STORAGE
Precautions to Be Taken in Handling and Storing:
Store at temperatures <150°F. Handle and store in a manner designed to minimize skin contact.

Other Precautions:
When this material is subjected to high temperatures (>250F) for prolonged periods (i.e., rubber curing operations), oil fumes may be released. This may cause potential health hazards. There is no OSHA PEL for curing fumes. General exhaust ventilation is recommended.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:
Poly(butadiene-co-styrene): None
Hydrocarbon mixture with Carbon numbers >C-20 and Boiling above 650°F: See below.

Hydrocarbon mixture contains the following:
Bitumenous Ingredients: OSHA PEL and ACGIH TLV (TWA)= 5mg/m³ (asphalt fumes); no STEL established
Heavy Naphthenic Process Oil: OSHA PEL and ACGIH TLV=5mg/m³ (oil mist); ACGIH STEL=10mg/m³ (oil mist)

Ventilation: General exhaust ventilation may be needed during certain processing operations. See Section 7.
Respiratory Protection: If exposure would exceed occupational exposure limits, use a NIOSH-approved respirator for protection against organic vapors and particulates.
Eye Protection: Not required
Skin Protection: Nitrile gloves would prevent possible skin irritation.
Other: None
Work / Hygienic Practices: At the end of each work period and before eating, smoking, using tobacco products, or using toilet facilities, wash with soap and water any areas of the body that contacted this product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Rubbery, brownish solid; slight oil-like odor.
Flash Point: >100°C
Lower Explosive Limit: Not applicable
**Firestone Polymers**  
**Material Safety Data Sheet**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method Used:</td>
<td>Pensky Martin Closed Cup</td>
</tr>
<tr>
<td>Upper Explosive Limit:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting Point:</td>
<td>Unknown</td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>Nil</td>
</tr>
<tr>
<td>Specific Gravity:</td>
<td>&gt;0.93</td>
</tr>
<tr>
<td>Vapor Density (Solvent Only):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Percent Volatile:</td>
<td>&lt;0.75%</td>
</tr>
<tr>
<td>Vapor Pressure (Solvent Only):</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**SECTION 10: STABILITY AND REACTIVITY**

- **Thermal Stability:** Material is stable.
- **Hazardous Polymerization:** Will not occur
- **Conditions to Avoid:** None

**SECTION 11: TOXICOLOGICAL INFORMATION**

No toxicological information is available for the polymer product as a whole although the polymer base is considered practically non-hazardous. None of the additives are carcinogenic.

**SECTION 12: ECOLOGICAL INFORMATION**

This product has not been tested for ecological hazards; ecological hazards are unknown.

**SECTION 13: DISPOSAL CONSIDERATIONS**

Incinerate or landfill in accordance with applicable environmental regulations.

**SECTION 14: TRANSPORT INFORMATION**

- **Regulatory Agency:** Not regulated by DOT
- **Proper Shipping Name:** Not applicable
- **Hazard Classification:** This product is not classified as hazardous.
- **Identification Number:** Not applicable
- **Labels Required:** No special labeling required.
- **Other Requirements:** None

**SECTION 15: REGULATORY INFORMATION**

- **SARA:** This product does not contain any chemicals reportable under SARA Title III, Section 313.
Firestone Polymers
Material Safety Data Sheet

TSCA: This product, including all additives, is on the TSCA inventory.

LABELING: No special labeling required. If special labeling is requested, please contact name/number given below.

<table>
<thead>
<tr>
<th>SECTION 16: OTHER INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Comments: None</td>
</tr>
<tr>
<td>Date Prepared / Revised:</td>
</tr>
<tr>
<td>Date of Previous MSDS:</td>
</tr>
<tr>
<td>Date Reviewed:</td>
</tr>
<tr>
<td>Changes Since Previous MSDS:  Modified to comply with REACH and GHS SDS format requirements, including renaming of headings, reversal of Sections 2 and 3, moving hazard ratings from Section 1 to Section 2, and replacing N/A with more detail. Section 1: Included specific product names and their uses, added e-mail address for contact, and added Only Representative information; Section 2: Added detail describing why the oil is not considered carcinogenic. Section 3: Changed oil definition from above 650°C to above 640°C, added oil common name, added oil EC No1, changed oil ingredient name from asphalt cement to bituminous ingredients, changed oil ingredient name from Severely Hydrotreated Heavy Naphthenic Petroleum Oil to Heavy Naphthenic Process Oil, added weight percents for oil ingredients; Section 5: Added dirt or sand, and dry chemical, added Unusual Fire and Explosion Hazards; Section 8: Added more STEL detail, changed names of oil ingredients; Section 9: Added flashpoint data; Section 16: Updated with current information and added e-mail address.</td>
</tr>
<tr>
<td>Name/Contact for additional information: Amy Ciesielczyk - Phone: 330-379-7867 (U.S.A.) or <a href="mailto:aciesielczyk@firestonepolymers.com">aciesielczyk@firestonepolymers.com</a></td>
</tr>
</tbody>
</table>

DISCLAIMER

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