MSDS - Material Safety Data Sheet

Product Name: MOTOR FLUSH

MSDS No.: MF2

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY
Address: P.O. BOX 159, 600 RADIATOR ROAD
City, ST Zip: INDIAN TRAIL, NC  28079
Emergency Contact: Rocky Mountain Poison Control Center
Emergency Telephone Number: 303-623-5716
Contact: Robert Geer

Information Telephone Number: 704-688-3430

Last Update: 04/14/2003

Chemical State: Liquid

Chemical Type: Mixture

II. Ingredients:

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical Name</th>
<th>% Range</th>
<th>BHS</th>
<th>IARC</th>
<th>SARA 313</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>78330128</td>
<td>Alkyl Aryl Sulfonate</td>
<td>0-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 mg/m</td>
</tr>
<tr>
<td>64742525</td>
<td>Naphthenic Petroleum Distillate</td>
<td>8-12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 mg/m3 (m)</td>
</tr>
<tr>
<td>68476346</td>
<td>Petroleum distillate, Aliphatic</td>
<td>88-92</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100 ppm</td>
</tr>
</tbody>
</table>

III. Hazardous Identification:

Hazard Category:

- Acute
- Chronic
- Fire
- Pressure
- Reactive

Hazardous Identification Information:

Danger: Harmful or Fatal if Swallowed. Combustible. Eye and Skin Irritant

IV. First Aid Measures:

Route(s) of Entry:

Absorption, Eye, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

Signs and Symptoms:

- Eye Contact: Irritant. Prolonged contact may cause conjunctivitis.
- Skin Contact: Irritant. Defatting of tissue, dermatitis may occur.
- Inhalation: Irritant to mucous membranes. Repeated exposure may cause narcosis.
- Ingestion: HARMFUL OR FATAL IF SWALLOWED. May cause burns to mouth, throat & stomach.

Medical Conditions Generally Aggravated by Exposure:
MSDS - Material Safety Data Sheet

Product Name: MOTOR FLUSH

MSDS No.: MF2

Emergency and First Aid Procedures:

- **Eye Contact:** Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.
- **Skin Contact:** Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.
- **Inhalation:** Remove to fresh air. If breathing becomes difficult get prompt medical attention.
- **Ingestion:** DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately.

Other Health Warnings:

- Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

### V. Fire Fighting Measures:

<table>
<thead>
<tr>
<th>Flash Point</th>
<th>Lower Explosive Limit</th>
<th>Upper Explosive Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>160°F</td>
<td>N/D</td>
<td>N/D</td>
</tr>
</tbody>
</table>

**F.P. Method:** TCC

**Fire Extinguishing Media:** Water Fog, Foam, Carbon Dioxide, Dry Chemical

**Special Fire Fighting Procedures:**

- Wear self-contained positive pressure breathing apparatus and protective clothes. Cool containers with a water fog. Do not use forced water stream as this could cause the fire to spread.

**Unusual Fire and Explosion:**

- Toxic fumes, gases or vapors may evolve on burning. Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back.

### VI. Accidental Release Measures:

**Steps to be Taken in Case Material is Released or Spilled:**

- Eliminate all ignition sources. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc). Using a non-metalic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material. Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occured.

### VII. Handling and Storage:

**Precautions to be Taken:**

- Handling: Use with adequate ventilation and proper protective equipment.
- Do not use near fire, sparks, or flame. Do not puncture or incinerate container.
- Store in cool, well ventilated area below 120°F away from heat sources. Avoid contact with alkalis and strong oxidizing agents.

**Other Precautions:**

- Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye.
- KEEP AWAY FROM CHILDREN AND ANIMALS!

### VIII. Exposure Controls/Personal Protection:

**Ventilation Requirements:**

- See Section 2 for applicable exposure limits. Maintain adequate ventilation.
- Avoid breathing vapors. In restricted areas, use respirator with approved chemical filters designed to remove vapor. In confined areas, use approved air line type respirator or hood. A self-contained breathing apparatus is required for vapor concentrations above TLV limit.
**Product Name:** MOTOR FLUSH

**MSDS No.:** MF2

**Personal Protective Equipment:**
- Wear safety glasses and gloves.
- For bulk use chemical wear:
  - Protective Gloves: Neoprene coated cotton gloves or Nitrile rubber chemical gloves.
  - Eye Protection: Safety glasses. For bulk use chemical splash goggles.
- Other Protective Clothing: Impervious clothing and rubber boots. Long sleeves, long pants, rubber apron.
- Other Protective Equipment: Emergency Eye Wash Fountain.

### IX. Physical and Chemical Properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>175°F</td>
</tr>
<tr>
<td>Specific Gravity (H₂O = 1)</td>
<td>0.86000</td>
</tr>
<tr>
<td>Solubility In Water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Appearance and Odor</td>
<td>Lt. Amber liquid with characteristic odor</td>
</tr>
</tbody>
</table>

### X. Stability and Reactivity:

**Stability:**
- Stable

**Incompatibility (Materials to Avoid):**
- Avoid open flame or sparks, oxidizing agents and acids.

**Decomposition/By Products:**
- Normal products of combustion, carbon dioxide, carbon monoxide, smoke, sulfur oxides, nitrogen oxides.

**Hazardous Polymerization:**
- Will not occur

### XI. Toxicological Information:

N/D

### XII. Ecological Information:

N/D

### XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in a recycling centers when empty. Before offering for recycling, empty the can or bottle by using the product according to the label. If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

### XIV. Transport Information:

DOT Shipping Name: Not DOT regulated.
DOT Hazard Class: None
MSDS - Material Safety Data Sheet

Product Name: MOTOR FLUSH

MSDS No.: MF2

XV. Regulatory Information:

See Section 2 for SARA Reportable Chemicals.

USA TSCA: All components of this material are listed on the US TSCA Inventory.

XVI. Other Information:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established
N/D: Not Determined
N/A: Not Applicable
N/AV: Not Available

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered soley for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.