



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Material name** Bel-Ray Silicone DOT 5 Brake Fluid  
**Product Code** 99450  
**MSDS Number** 6420  
**Version #** 1.0  
**Revision date** 06-16-2010  
**Product use** Brake Fluid  
**Manufacturer information** Bel-Ray Company, Inc.  
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Farmingdale, NJ 07727  
United States of America  
+1 732 938 2421  
CHEMTREC: +1 703-527-3887 (outside USA)  
CHEMTREC: 800-424-9300 (USA)

## 2. Hazards Identification

**Emergency overview** Irritating to eyes and skin. This is a consumer care product that is safe for consumers when used according to the label directions. Like many consumer products, a small number of individuals may experience reactions such as redness, rash and / or swelling upon prolonged or repeated skin contact or eye contact.

**OSHA regulatory status** This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

**Potential health effects**

**Routes of exposure** Inhalation. Skin contact. Eye contact.

**Eyes** Causes eye irritation.

**Skin** Irritating to skin.

**Inhalation** Prolonged inhalation may be harmful. Health injuries are not known or expected under normal use.

**Ingestion** Do not ingest.

**Signs and symptoms** Irritation of eyes and mucous membranes.

**Potential environmental effects** Not expected to be harmful to aquatic organisms.

## 3. Composition / Information on Ingredients

| Components         | CAS #    | Percent |
|--------------------|----------|---------|
| TRIBUTYL PHOSPHATE | 126-73-8 | 1 - 2.5 |

## 4. First Aid Measures

**First aid procedures**

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**Skin contact** Remove and isolate contaminated clothing and shoes. Wash off immediately with plenty of water. Get medical attention if irritation develops and persists.

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist.

**Ingestion** Rinse mouth thoroughly. Do not induce vomiting. If ingestion of a large amount does occur, call a poison control center immediately. Never give liquid to an unconscious person.

**General advice** Call a physician if symptoms develop or persist. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire Fighting Measures

**Flammable properties** Not flammable by OSHA criteria. Not combustible by OSHA criteria.

## Extinguishing media

### Suitable extinguishing media

Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

### Fire fighting equipment/instructions

Not available.

### Specific methods

Cool containers exposed to flames with water until well after the fire is out.

### Hazardous combustion products

May include oxides of phosphorus. Carbon monoxide and carbon dioxide.

## 6. Accidental Release Measures

### Personal precautions

Keep unnecessary personnel away. Keep upwind. Keep out of low areas. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. In case of spills, beware of slippery floors and surfaces.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

### Methods for containment

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

### Methods for cleaning up

Should not be released into the environment. Dike far ahead of spill for later disposal. Avoid dust formation. Wipe up with absorbent material (e.g. cloth, fleece). Following product recovery, flush area with water.

Never return spills in original containers for re-use.

## 7. Handling and Storage

### Handling

DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Avoid contact with skin. Avoid contact with eyes. Do not use in areas without adequate ventilation. Avoid prolonged exposure. Wash thoroughly after handling. Avoid release to the environment.

### Storage

Keep away from heat, sparks and open flame. Room temperature - normal conditions. Keep container tightly closed. Keep out of the reach of children. Use care in handling/storage.

## 8. Exposure Controls / Personal Protection

### Occupational exposure limits

#### ACGIH

##### Components

##### Type

##### Value

TRIBUTYL PHOSPHATE (126-73-8)

TWA

0.2000 ppm

#### U.S. - OSHA

##### Components

##### Type

##### Value

TRIBUTYL PHOSPHATE (126-73-8)

PEL

5.0000 mg/m3

TWA

0.2000 ppm

2.5000 mg/m3

### Engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### Personal protective equipment

#### Eye / face protection

Avoid contact with eyes. Chemical goggles are recommended.

#### Skin protection

Avoid contact with the skin. Wear suitable protective clothing.

#### Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

#### General hygiene considerations

Avoid contact with eyes. Avoid contact with skin. Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical & Chemical Properties

### Appearance

Liquid.

### Color

Purple

### Odor

Odorless.

### Odor threshold

Not available.

### Physical state

Liquid

|   |   |
|---|---|
| <b>Form</b>   | Liquid.   |
| <b>pH</b>   | Not available.                                  |
| <b>Melting point/Freezing point</b>                   | 32 °F (0 °C) estimated / 32 °F (0 °C) estimated |
| <b>Boiling point</b>                                  | 552.2 °F (289 °C) estimated                     |
| <b>Flash point</b>                                    | 402.8 °F (206 °C)                               |
| <b>Evaporation rate</b>                               | Not available.                                  |
| <b>Flammability limits in air, upper, % by volume</b> | Not available.                                  |
| <b>Flammability limits in air, lower, % by volume</b> | Not available.                                  |
| <b>Vapor pressure</b>                                 | < 0.1 mm Hg                                     |
| <b>Density</b>  | 958 kg/m <sup>3</sup>                           |
| <b>Vapor density</b>                                  | Not available.                                  |
| <b>Specific gravity</b>                               | 0.958   |
| <b>Relative density</b>                               | Not available.                                  |
| <b>Solubility (water)</b>                             | Not available.                                  |
| <b>Solubility (other)</b>                             | Not available.                                  |
| <b>Partition coefficient (n-octanol/water)</b>        | Not available.                                  |
| <b>Auto-ignition temperature</b>                      | Not available.                                  |
| <b>Decomposition temperature</b>                      | Not available.                                  |
| <b>VOC</b>  | Not available.                                  |
| <b>Viscosity</b>                                      | 42 - 43 cSt @ 77 °F (25 °C)                     |

## 10. Chemical Stability & Reactivity Information

|   |  |
|---|--|
| <b>Chemical stability</b>               | Material is stable under normal conditions.  |
| <b>Conditions to avoid</b>              | Heat, flames and sparks.   |
| <b>Hazardous decomposition products</b> | May include oxides of phosphorus. At thermal decomposition temperatures, carbon monoxide and carbon dioxide. |

## 11. Toxicological Information

### Toxicological data

| Product                                      | Test Results  |
|--|---|
| Bel-Ray Silicone DOT 5 Brake Fluid (Mixture) | Acute Inhalation LC50 Cat: 10089 mg/l estimated<br>Acute Inhalation LC50 Rat: 5467 mg/l estimated<br>Acute Oral LD50 Chicken: 82800 mg/kg estimated<br>Acute Other LD50 Mouse: 7044 mg/kg estimated<br>Acute Other LD50 Rat: 35.56 g/kg estimated   |
| Components                                   | Test Results  |
| TRIBUTYL PHOSPHATE (126-73-8)                | Acute Dermal LD50 Rabbit: > 3100 mg/kg<br>Acute Inhalation LC50 Cat: 227 mg/l 4.00 Hours<br>Acute Inhalation LC50 Rat: 123 mg/l 6.00 Hours<br>Acute Oral LD50 Chicken: 1863 mg/kg<br>Acute Other LD50 Mouse: 158.5 mg/kg<br>Acute Other LD50 Rat: 100 mg/kg<br>Acute Other LD50 Rat: 0.8 g/kg |

\* Estimates for product may be based on additional component data not shown.

|                      |   |
|----------------------|---|
| <b>Acute effects</b> | Causes skin and eye irritation.   |
| <b>Local effects</b> | Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Irritating to eyes. Irritating to skin. |

|                        |   |
|------------------------|---|
| <b>Chronic effects</b> | Prolonged inhalation may be harmful.  |
| <b>Carcinogenicity</b> | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. |

## 12. Ecological Information

### Ecotoxicological data

| Product                                      | Test Results   |
|--|--|
| Bel-Ray Silicone DOT 5 Brake Fluid (Mixture) | LC50 Fish: 337 mg/l 96.00 hours estimated                          |
| Components                                   | Test Results   |
| TRIBUTYL PHOSPHATE (126-73-8)                | LC50 Fathead minnow (Pimephales promelas): 1 - 10 mg/l 96.00 hours |

\* Estimates for product may be based on additional component data not shown.

|                                      |   |
|--------------------------------------|---|
| <b>Ecotoxicity</b>                   | Not expected to be harmful to aquatic organisms.  |
| <b>Environmental effects</b>         | An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. |
| <b>Persistence and degradability</b> | Not available.  |

## 13. Disposal Considerations

|  |  |
|--|--|
| <b>Disposal instructions</b>                 | Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations. |
| <b>Waste from residues / unused products</b> | Dispose of in accordance with local regulations.   |

## 14. Transport Information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

## 15. Regulatory Information

|                               |   |
|-------------------------------|---|
| <b>US federal regulations</b> | This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.<br>All components are on the U.S. EPA TSCA Inventory List.<br><br>CERCLA/SARA Hazardous Substances - Not applicable. |
|-------------------------------|---|

### CERCLA (Superfund) reportable quantity

None

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

|                          |   |
|--------------------------|---|
| <b>Hazard categories</b> | Immediate Hazard - Yes<br>Delayed Hazard - No<br>Fire Hazard - No<br>Pressure Hazard - No<br>Reactivity Hazard - No |
|--------------------------|---|

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** No

### Inventory status

| Country(s) or region | Inventory name   | On inventory (yes/no)* |
|----------------------|--|------------------------|
| Australia            | Australian Inventory of Chemical Substances (AICS)         | Yes                    |
| Canada               | Domestic Substances List (DSL)                             | Yes                    |
| China                | Inventory of Existing Chemical Substances in China (IECSC) | Yes                    |

| Country(s) or region        | Inventory name   | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Europe                      | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes                    |
| Japan                       | Inventory of Existing and New Chemical Substances (ENCS)               | Yes                    |
| Korea                       | Existing Chemicals List (ECL)  | Yes                    |
| New Zealand                 | New Zealand Inventory  | Yes                    |
| Philippines                 | Philippine Inventory of Chemicals and Chemical Substances (PICCS)      | Yes                    |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                          | Yes                    |

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**State regulations** This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**US - Pennsylvania RTK - Hazardous Substances: Listed substance**

TRIBUTYL PHOSPHATE (CAS 126-73-8)

Listed.

## 16. Other Information

**Further information** HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings**  
Health: 2  
Flammability: 1  
Physical hazard: 0

**NFPA ratings**  
Health: 2  
Flammability: 1  
Instability: 0

**Disclaimer** Bel-Ray Company cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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