



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Material name** Bel-Ray Super DOT 4 Brake Fluid  
**Product Code** 99480  
**MSDS Number** 6419  
**Version #** 1.1  
**Revision date** 04-20-2012  
**Product use** Brake Fluid  
**Manufacturer information** Bel-Ray Company, Inc.  
P.O. Box 526  
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** WARNING  
Irritating to eyes and skin.

**Potential health effects**  
**Routes of exposure** Ingestion. Skin contact. Eye contact.  
**Eyes** Avoid contact with eyes.  
**Skin** Irritating to skin. Avoid contact with the skin.  
**Inhalation** May cause irritation of respiratory tract.  
**Ingestion** Irritating. May cause nausea, stomach pain and vomiting.

**Target organs** Kidneys. Liver.

**Chronic effects** Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

**Signs and symptoms** Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
2,2'-(octylimino)bisethanol	15520-05-5	3 - 7
Diethylene Glycol	111-46-6	1 - 5
Other components below reportable levels		60 - 100

**Composition comments** Not applicable to consumer products.

## 4. First Aid Measures

**First aid procedures**  
**Eye contact** Flush eyes immediately with large amounts of water. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Continue rinsing.  
**Skin contact** Remove and isolate contaminated clothing and shoes. Wash off immediately with soap and plenty of water.  
**Inhalation** If symptoms develop move victim to fresh air. Get medical attention, if needed.  
**Ingestion** Never give anything by mouth to a victim who is unconscious or is having convulsions. Rinse mouth thoroughly. Do not induce vomiting. Never give liquid to an unconscious person.

**General advice** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance.

## 5. Fire Fighting Measures

<b>Flammable properties</b>	Not flammable by WHMIS criteria.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Water. Do not use water jet as an extinguisher, as this will spread the fire.
<b>Protection of firefighters</b>	
<b>Protective equipment for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Fire fighting equipment/instructions</b>	Not available.
<b>Explosion data</b>	
<b>Sensitivity to static discharge</b>	Not available.
<b>Sensitivity to mechanical impact</b>	Not available.
<b>Hazardous combustion products</b>	Carbon monoxide and carbon dioxide.

## 6. Accidental Release Measures

<b>Personal precautions</b>	Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
<b>Methods for containment</b>	Stop leak if you can do so without risk. Dike the spilled material, where this is possible.
<b>Methods for cleaning up</b>	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: Clean surface thoroughly to remove residual contamination.  Never return spills in original containers for re-use. Clean up in accordance with all applicable regulations. For waste disposal, see section 13 of the MSDS.
<b>Other information</b>	Clean up in accordance with all applicable regulations.

## 7. Handling and Storage

<b>Handling</b>	Avoid breathing mist or vapor. Avoid contact with skin. Avoid contact with eyes. Do not use in areas without adequate ventilation. When using do not eat or drink. Wash thoroughly after handling.
<b>Storage</b>	Store in a closed container away from incompatible materials. Use care in handling/storage.

## 8. Exposure Controls / Personal Protection

<b>Engineering controls</b>	Ensure adequate ventilation, especially in confined areas.
<b>Personal protective equipment</b>	
<b>Eye / face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

## 9. Physical & Chemical Properties

<b>Appearance</b>	Not available.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Not available.
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.

<b>pH</b>	7 - 11.5
<b>Vapor pressure</b>	0.11 hPa estimated
<b>Density</b>	1.07 - 1.09 g/cm <sup>3</sup>
<b>Vapor density</b>	Not available.
<b>Boiling point</b>	> 527 °F (> 275 °C)
<b>Melting point/Freezing point</b>	13.28 °F (-10.4 °C) estimated
<b>Solubility (water)</b>	350 g/l
<b>Solubility (other)</b>	Not available.
<b>Specific gravity</b>	1.07 estimated
<b>Relative density</b>	Not available.
<b>Flash point</b>	> 264.2 °F (> 129 °C)
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	444 °F (228.89 °C) estimated
<b>VOC</b>	2 % estimated
<b>Viscosity</b>	17 - 18 mm <sup>2</sup> /s
<b>Percent volatile</b>	2 % estimated
<b>Other data</b>	
<b>Flammability class</b>	Combustible IIIB estimated
<b>Viscosity temperature</b>	68 °F (20 °C)

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Avoid temperatures exceeding the flash point.
<b>Incompatible materials</b>	Not available.
<b>Hazardous decomposition products</b>	At thermal decomposition temperatures, carbon monoxide and carbon dioxide.

## 11. Toxicological Information

### Toxicological data

<b>Product</b>	<b>Test Results</b>
Bel-Ray Super DOT 4 Brake Fluid (Mixture)	Acute Oral LD50 Guinea pig: 700 g/kg estimated Acute Oral LD50 Mouse: 665 g/kg estimated Acute Oral LD50 Rabbit: 1345 g/kg estimated Acute Oral LD50 Rat: 780 g/kg estimated Acute Other LD50 Mouse: 480 g/kg estimated Acute Other LD50 Rat: 385 g/kg estimated
<b>Components</b>	<b>Test Results</b>
Diethylene Glycol (111-46-6)	Acute Dermal LD50 Rabbit: 11890 mg/kg Acute Oral LD50 Cat: 3300 mg/kg Acute Oral LD50 Dog: 9000 mg/kg Acute Oral LD50 Guinea pig: 8700 mg/kg Acute Oral LD50 Guinea pig: 14 g/kg Acute Oral LD50 Mouse: 23700 mg/kg Acute Oral LD50 Mouse: 13.3 g/kg Acute Oral LD50 Rabbit: 26.9 g/kg Acute Oral LD50 Rat: > 7700 mg/kg Acute Oral LD50 Rat: 15.6 g/kg Acute Other LD50 Mouse: 22500 mg/kg Acute Other LD50 Mouse: 9.6 g/kg Acute Other LD50 Rabbit: 2000 mg/kg

**Components****Test Results****Acute effects**

Causes skin irritation. Causes skin and eye irritation.

**Local effects**

May irritate eyes and skin.

**Chronic effects**

Not expected to be hazardous by WHMIS criteria.

Acute Other LD50 Rat: 7700 mg/kg

Acute Other LD50 Rat: 7.7 g/kg

**12. Ecological Information****Ecotoxicological data****Components****Test Results**

Diethylene Glycol (111-46-6)

LC50 Western mosquitofish (*Gambusia affinis*): > 32000 mg/l  
96 hours

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

**Persistence and degradability**

Not available.

**13. Disposal Considerations****Disposal instructions**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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.

**Contaminated packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport Information****TDG**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**15. Regulatory Information****Canadian regulations**

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**WHMIS status**

Controlled

**WHMIS classification**

D2B - Other Toxic Effects-TOXIC

**WHMIS labeling****Inventory status****Country(s) or region**

Canada

Europe

Japan

Philippines

**Inventory name**

Domestic Substances List (DSL)

European Inventory of Existing Commercial Chemical Substances (EINECS)

Inventory of Existing and New Chemical Substances (ENCS)

Philippine Inventory of Chemicals and Chemical Substances (PICCS)

**On inventory (yes/no)\***

Yes

Yes

Yes

Yes

**Country(s) or region**

United States &amp; Puerto Rico

**Inventory name**

Toxic Substances Control Act (TSCA) Inventory

**On inventory (yes/no) \***

Yes

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

**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.

**Issue date**

04-20-2012

**This data sheet contains changes from the previous version in section(s):**

This document has undergone significant changes and should be reviewed in its entirety.