



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 #	1.0
Revision date	06-16-2010
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	CAUTION 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	Skin contact. Eye contact.
Eyes	Causes eye irritation. Avoid contact with eyes.
Skin	Irritating to skin. Avoid contact with the skin.
Inhalation	Avoid breathing dust/fume/gas/mist/vapors/spray.
Ingestion	Do not ingest.
Target organs	Liver. Kidneys.
Chronic effects	Edema. Jaundice. Liver injury may occur. Kidney injury may occur.
Signs and symptoms	Edema. Liver enlargement. Jaundice. Proteinuria.
Potential environmental effects	Not expected to be harmful to aquatic organisms.

3. Composition / Information on Ingredients

Components	CAS #	Percent
2,2'-(OCTYLIMINO) BISETHANOL	15520-05-5	2.5 - 10
DIETHYLENE GLYCOL	111-46-6	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.
Notes to physician	Symptoms may be delayed.

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 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. Ventilate closed spaces before entering them. 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. Store in a well-ventilated place. Keep container tightly closed. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children. Use care in handling/storage.

8. Exposure Controls / Personal Protection

Engineering controls Ensure adequate ventilation, especially in confined areas.

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 Wear positive pressure self-contained breathing apparatus (SCBA).

General hygiene considerations Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance Liquid.

Color Yellow.

Odor Characteristic.

Odor threshold Not available.

Physical state Liquid

Form Liquid.

pH 7 - 11.5

Melting point/Freezing point 19.4 °F (-6.5 °C) estimated / 19.4 °F (-6.5 °C) estimated

Boiling point > 527 °F (> 275 °C)

Flash point > 264.2 °F (> 129 °C)

Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	0.106 hPa estimated
Density	1.07 - 1.09 g/cm ³
Vapor density	Not available.
Specific gravity	1.07011 estimated
Relative density	Not available.
Solubility (water)	350 g/l
Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	444.2 °F (228.889 °C) estimated
Decomposition temperature	Not available.
VOC	2 % estimated
Viscosity	17 - 18 mm ² /s @ 68 °F (20 °C)
Percent volatile	2 % estimated

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Heat, flames and sparks.
Hazardous decomposition products	At thermal decomposition temperatures, carbon monoxide and carbon dioxide.

11. Toxicological Information

Toxicological data

Components

DIETHYLENE GLYCOL (111-46-6)

Test Results

Acute Dermal LD50 Rabbit: > 11890 mg/kg

Acute Oral LD50 Rat: > 7700 mg/kg

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

Acute effects	Causes skin and eye irritation.
Local effects	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Liver toxicity. Irritating to eyes. Irritating to skin.
Chronic effects	Hazardous by OSHA criteria. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged exposure may cause chronic effects.
Subchronic effects	Kidney injury may occur.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Further information	Symptoms may be delayed.

12. Ecological Information

Ecotoxicological data

Product

Bel-Ray Super DOT 4 Brake Fluid (Mixture)

Test Results

LC50 Fish: 49204 mg/l 96.00 hours estimated

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

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

13. Disposal Considerations

Disposal instructions 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.

Waste from residues / unused products 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

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
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)*
Canada	Domestic Substances List (DSL)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	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

DIETHYLENE GLYCOL (CAS 111-46-6) 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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