



SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Material name Bel-Ray Super DOT 4 Brake Fluid
Product code 99480
SDS Number 6419
Recommended use Brake fluid
Version No. 1.1
Revision date 20-April-2012
Manufacturer

Bel-Ray Company, Inc.
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2. HAZARDS IDENTIFICATION

NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS #	Percent
2,2'-(octylimino)bisethanol	15520-05-5	< 10
Diethylene glycol	111-46-6	< 10
Other components below reportable levels		> 60

4. FIRST-AID MEASURES

Inhalation If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.

Ingestion Do not induce vomiting. Never give liquid to an unconscious person.

General advice If you feel unwell, seek medical advice (show the label where possible).

5. FIRE-FIGHTING MEASURES

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

Extinguishing media which must not be used for safety reasons Water. Do not use water jet as an extinguisher, as this will spread the fire.

Hazardous combustion products Carbon monoxide and carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Wear appropriate protective equipment and clothing during clean-up.

Environmental precautions Prevent further leakage or spillage if safe to do so.

Containment procedures Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.

Methods for cleaning up

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. For waste disposal, see section 13.

7. HANDLING AND STORAGE

Handling

Use care in handling/storage.

Storage

Store in original tightly closed container. Store in accordance with local/regional/national/international regulation.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

Components	Type	Value
Diethylene glycol (111-46-6)	TWA	100 mg/m ³ 23 ppm

Recommended monitoring procedures

Additional exposure data Not available.

Engineering measures

General ventilation normally adequate.

Personal protective equipment

Respiratory protection No personal respiratory protective equipment normally required.

Hand protection Not normally needed.

Eye protection Not normally needed.

Skin and body protection Normal work clothing (long sleeved shirts and long pants) is recommended.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Not available.

Physical state

Liquid.

Form

Liquid.

Colour

Not available.

Odour

Not available.

Odour threshold

Not available.

pH

7 - 11.5

Vapour pressure

0.11 hPa estimated

Density

1.07 - 1.09 g/cm³

Vapour density

Not available.

Boiling point

> 275 °C (> 527 °F)

Melting point/freezing point

-10.4 °C (13.28 °F) estimated

Solubility (water)

350 g/l

Solubility (other)

Not available.

Specific gravity

1.07 estimated

Flash point

> 129 °C (> 264.2 °F)

Flammability limits in air, upper, % by volume

Not available.

Flammability limits in air, lower, % by volume

Not available.

Auto-ignition temperature

228.89 °C (444 °F) estimated

VOC

2 % estimated

Viscosity

17 - 18 mm²/s

Percent volatile

2 % estimated

Other data

Flammability class Combustible III B estimated

Viscosity temperature 20 °C (68 °F)

10. STABILITY AND REACTIVITY

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Avoid temperatures exceeding the flash point.
Materials to avoid	Strong oxidizing agents.
Hazardous decomposition products	At thermal decomposition temperatures, carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Toxicological data

Product

Test results

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
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Components

Test results

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 Acute Other LD50 Rat: 7700 mg/kg Acute Other LD50 Rat: 7.7 g/kg
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Routes of exposure	Not applicable
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Reproductivity	Not classified.
Epidemiology	No epidemiological data is available for this product.
Local effects	May irritate eyes and skin.

12. ECOLOGICAL INFORMATION

Ecotoxicological data

Components

Test results

Diethylene glycol (111-46-6)	LC50 Western mosquitofish (<i>Gambusia affinis</i>): > 32000 mg/l 96 hours
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* Estimates for product may be based on additional component data not shown.

Ecotoxicity	Not expected to be harmful to aquatic organisms.
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13. DISPOSAL CONSIDERATIONS

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

ADG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. REGULATORY INFORMATION

National regulations

This Material Safety Data Sheet was prepared in accordance with the Australia National Code of Practice for the Preparation of Material Safety Data Sheets (NOHSC: 2011.)

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)

16. OTHER INFORMATION

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

20-April-2012

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

IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING:
Product Uses