



SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Identification of the substance/preparation	Bel-Ray Silicone DOT 5 Brake Fluid
Product code	99450
MSDS Number	6420
Version No.	1,0
Revision Date	16-June-2010
Manufacturer	Bel-Ray Company, Inc. P.O. Box 526 Farmingdale, NJ 07727 United States of America +1 732 938 2421 CHEMTREC: 800-424-9300 (USA) CHEMTREC: +1 703-527-3887 (outside USA - call collect)
	Bel-Ray Europe S.A. Avenue Louise, 304 Bruxelles-Brussel, B-1050 Belgium +32 (0) 2 540 84 52 Europe: +32 (0) 2 201 18 87 Europe Emergency: 112

2. HAZARDS IDENTIFICATION

This preparation is classified as dangerous according to Directive 1999/45/EC and its amendments

Classification	Carc. Cat. 3;R40
Physical hazards	Not classified as a physical hazard.
Health hazards	Limited evidence of a carcinogenic effect. Prolonged exposure may cause chronic effects.
Environmental hazards	Not classified as an environmental hazard.
Specific hazards	Limited evidence of a carcinogenic effect.
Main symptoms	Irritation of eyes and mucous membranes.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	Classification	CAS-No.	%	EC-No. / REACH Registration No.	Notes
TRIBUTYL PHOSPHATE	Carc. Cat. 3;R40, Xn;R22, Xi;R38	126-73-8	1 - 2,5	204-800-2	#

#: This substance has workplace exposure limit(s).

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

The full text for all R-phrases is displayed in Section 16.

4. FIRST-AID MEASURES

Inhalation	Move to fresh air. Oxygen or artificial respiration if needed. Get medical attention, if needed.
Skin contact	Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. If swallowed, seek medical advice immediately and show this container or label. Never give liquid to an unconscious person.
General advice	Call a physician if symptoms develop or persist.
Notes to physician	In case of shortness of breath, give oxygen. Keep victim warm. Symptoms may be delayed.

5. FIRE-FIGHTING MEASURES

Fire fighting equipment/instructions	In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.
Suitable extinguishing media	Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Specific hazards	Fire may produce irritating, corrosive and/or toxic gases.
Special protective equipment for fire-fighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Keep unnecessary personnel away. Keep upwind. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. 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.
Containment procedures	Stop the flow of material, if this is without risk.
Methods for cleaning up	Dike far ahead of spill for later disposal. 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 use in areas without adequate ventilation. Avoid prolonged exposure. Wash thoroughly after handling.
Storage	Keep locked up. Room temperature - normal conditions. Keep out of the reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values

Belgium

Components

	Type	Value
TRIBUTYL PHOSPHATE (126-73-8)	TWA	0.2000 ppm 2.2000 mg/m ³

Denmark

Components

	Type	Value
TRIBUTYL PHOSPHATE (126-73-8)	TLV	0.2000 ppm 2.5000 mg/m ³

France

Components

	Type	Value
TRIBUTYL PHOSPHATE (126-73-8)	VME	0.2000 ppm 2.5000 mg/m ³

Italy

Components

	Type	Value
TRIBUTYL PHOSPHATE (126-73-8)	TWA	0.2000 ppm

Spain

Components

	Type	Value
TRIBUTYL PHOSPHATE (126-73-8)	TWA	0.2000 ppm 2.2000 mg/m ³

United Kingdom

Components

	Type	Value
TRIBUTYL PHOSPHATE (126-73-8)	STEL TWA	5.0000 mg/m ³ 5.0000 mg/m ³

Exposure 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.
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Occupational exposure controls

Respiratory protection

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

Hand protection

Wear suitable gloves.

Eye protection	Not normally needed.
Skin and body protection	Wear suitable protective clothing.
General	Applicable for industrial settings only: Use personal protective equipment as required. Keep working clothes separately.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid.
Physical state	Liquid
Form	Liquid.
Colour	Purple
Odour	Odourless.
Odour threshold	Not available.
pH	Not available.
Boiling point	289 °C (552,2 °F) estimated
Flash point	206 °C (402,8 °F)
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapour pressure	< 0,1 mm Hg
Density	958 kg/m ³
Relative density	Not available.
Solubility (water)	Not available.
Solubility (other)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Viscosity	42 - 43 cSt @ 25 °C (77 °F)
Vapour density	Not available.
Evaporation rate	Not available.
Melting point/Freezing point	0 °C (32 °F) estimated / 0 °C (32 °F) estimated
Auto-ignition temperature	Not available.
VOC	Not available.

10. STABILITY AND REACTIVITY

Hazardous decomposition products	Oxides of phosphorus. At thermal decomposition temperatures, carbon monoxide and carbon dioxide.
Stability	Material is stable under normal conditions.
Materials to avoid	Strong oxidising agents.

11. TOXICOLOGICAL INFORMATION

Toxicological data	
Product	Test results
Bel-Ray Silicone DOT 5 Brake Fluid (Mixture)	Acute Inhalation LC50 Cat: 10089 mg/l estimated Acute Inhalation LC50 Rat: 5467 mg/l estimated Acute Oral LD50 Chicken: 82800 mg/kg estimated Acute Other LD50 Mouse: 7044 mg/kg estimated Acute Other LD50 Rat: 35,56 g/kg estimated
Components	Test results
TRIBUTYL PHOSPHATE (126-73-8)	Acute Dermal LD50 Rabbit: > 3100 mg/kg Acute Inhalation LC50 Cat: 227 mg/l 4.00 Hours Acute Inhalation LC50 Rat: 123 mg/l 6.00 Hours Acute Oral LD50 Chicken: 1863 mg/kg Acute Other LD50 Mouse: 158,5 mg/kg Acute Other LD50 Rat: 100 mg/kg

Components**Test results**

TRIBUTYL PHOSPHATE (126-73-8)

Acute Other LD50 Rat: 0,8 g/kg

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

Routes of exposure

Inhalation. Not applicable.

Chronic toxicity

Prolonged inhalation may be harmful.

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

Contains no ingredient listed as toxic to reproduction

Epidemiology

No epidemiological data is available for this product.

Local effects

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Contact with eyes may cause irritation. May cause skin irritation.

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.

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.

13. DISPOSAL CONSIDERATIONS**Disposal instructions**

Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Dispose in accordance with all applicable regulations.

Waste from residues / unused products

Dispose of in accordance with local regulations.

Contaminated packaging

Offer rinsed packaging material to local recycling facilities.

EU wastecodes

Waste codes should be assigned by the user based on the application for which the product was used. The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

14. TRANSPORT INFORMATION**ADR**

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. REGULATORY INFORMATION**Labeling****Contains**

TRIBUTYL PHOSPHATE

Symbol(s)

Harmful

R-phrases(s)

R40 Limited evidence of a carcinogenic effect.

S-phrase(s) S1/2 Keep locked up and out of the reach of children.
S36/37 Wear suitable protective clothing and gloves.

Other regulations The product is classified and labelled in accordance with EC directives or respective national laws
This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. Pregnant women should not work with the product, if there is the least risk of exposure. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work.

Water hazard class
VwVwS WGK1

16. OTHER INFORMATION

Wording of the R-phrases in sections 2 and 3 R22 Harmful if swallowed.
R38 Irritating to skin.
R40 Limited evidence of a carcinogenic effect.

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
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)

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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