



# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Material name** Bel-Ray Super Clean Chain Lube  
**Product code** 99470  
**MSDS Number** 6436  
**Version No.** 1.0  
**Revision Date** 16-June-2010  
**Manufacturer**

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## 2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

**Classification** F+;R12, Repr. Cat. 3;R62, Xn;R48/20, Xi;R38, R67, N;R51-53

**Risk phrase(s)** R12 Extremely flammable.  
R38 Irritating to skin.  
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.  
R62 Possible risk of impaired fertility.  
R67 Vapours may cause drowsiness and dizziness.  
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety phrase(s)** S1/2 Keep locked up and out of the reach of children.  
S9 Keep container in a well-ventilated place.  
S23 Do not breathe fumes, vapour.  
S29 Do not empty into drains.  
S36/37 Wear suitable protective clothing and gloves.  
S38 In case of insufficient ventilation, wear suitable respiratory equipment.  
S51 Use only in well-ventilated areas.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS #	Percent
HEXANE; MIXTURE OF ISOMERS (EXCL N-HEXANE)	Proprietary	10 - 30
N-HEXANE	110-54-3	10 - 30
PROPANE	74-98-6	10 - 30
Interchangeable base oils, one or more: 64742-01-4, 64742-52-5, 64741-88-4		3 - 10
Butane	106-97-8	<= 10
Calcium carbonate	471-34-1	<= 10
Cyclohexane	110-82-7	<= 10
ISOBUTANE	75-28-5	<= 10
Limestone	1317-65-3	<= 10
Petrolatum	8009-03-8	<= 10

Solvent naphtha (petroleum), medium aliph.

64742-88-7

<= 10

Zinc oxide

1314-13-2

<= 10

#### 4. FIRST-AID MEASURES

<b>Inhalation</b>	Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention immediately.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Wash off immediately with plenty of water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Flush eyes immediately with large amounts of water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth thoroughly. Do not induce vomiting. Do not use mouth-to-mouth method if victim ingested the substance. In the unlikely event of swallowing contact a physician or poison control centre.
<b>General advice</b>	In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. 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.
<b>Notes to physician</b>	Oxygen, if needed. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

#### 5. FIRE-FIGHTING MEASURES

<b>Suitable extinguishing media</b>	Water. Foam. Dry powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Extinguishing media which must not be used for safety reasons</b>	Do not use a solid water stream as it may scatter and spread fire.
<b>Unusual fire &amp; explosion hazards</b>	Heat may cause the containers to explode.
<b>Specific hazards</b>	Fire may produce irritating, corrosive and/or toxic gases.
<b>Special protective equipment for fire-fighters</b>	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Structural firefighters protective clothing will only provide limited protection.
<b>Specific methods</b>	Cool containers exposed to flames with water until well after the fire is out.
<b>Hazardous combustion products</b>	Carbon monoxide and carbon dioxide.

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Keep unnecessary personnel away. Keep upwind. Keep out of low areas. Fully encapsulating, vapour protective clothing should be worn for spills and leaks with no fire. 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. Avoid inhalation of vapours and spray mists. In case of spills, beware of slippery floors and surfaces.
<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
<b>Containment procedures</b>	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable.
<b>Methods for cleaning up</b>	Prevent product from entering drains. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water.

#### 7. HANDLING AND STORAGE

<b>Handling</b>	Pressurised container: Do not pierce or burn, even after use. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Ground and bond containers when transferring material. Do not use if spray button is missing or defective. Do not re-use empty containers. Do not breathe dust/fume/gas/mist/vapors/spray. Do not use in areas without adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wash thoroughly after handling. Do not empty into drains.
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**Storage**

Keep locked up. Level 1 Aerosol.

Contents under pressure. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Avoid exposure to long periods of sunlight. Refrigeration recommended. Store in a well-ventilated place. Keep out of the reach of children.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Occupational exposure limits****ACGIH**

Components	Type	Value	Form
Butane (106-97-8)	TWA	1000.0000 ppm	
Cyclohexane (110-82-7)	TWA	100.0000 ppm	
Interchangeable base oils, one or more: 64742-01-4, 64742-52-5, 64741-88-4	STEL	10.0000 mg/m3	Mist.
	TWA	5.0000 mg/m3	Mist.
ISOBUTANE (75-28-5)	TWA	1000.0000 ppm	
N-HEXANE (110-54-3)	TWA	50.0000 ppm	
PROPANE (74-98-6)	TWA	1000.0000 ppm	
Zinc oxide (1314-13-2)	STEL	10.0000 mg/m3	Respirable fraction.
	TWA	2.0000 mg/m3	Respirable fraction.

**Australia**

Components	Type	Value	Form
Butane (106-97-8)	TWA	800.0000 ppm 1900.0000 mg/m3	
Calcium carbonate (471-34-1)	TWA	10.0000 mg/m3	Inspirable dust.
Cyclohexane (110-82-7)	STEL	300.0000 ppm 1050.0000 mg/m3	
	TWA	100.0000 ppm 350.0000 mg/m3	
Interchangeable base oils, one or more: 64742-01-4, 64742-52-5, 64741-88-4	TWA	5.0000 mg/m3	Mist.
Limestone (1317-65-3)	TWA	10.0000 mg/m3	Inspirable dust.
N-HEXANE (110-54-3)	TWA	72.0000 mg/m3 20.0000 ppm	
Zinc oxide (1314-13-2)	STEL	10.0000 mg/m3	Fume.
	TWA	10.0000 mg/m3 5.0000 mg/m3	Inspirable dust. Fume.

**Engineering measures**

Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment****Respiratory protection**

If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator. In case of insufficient ventilation, wear suitable respiratory equipment.

**Hand protection**

Wear suitable gloves.

**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**

When using do not smoke. Handle in accordance with good industrial hygiene and safety practices.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Aerosol
<b>Physical state</b>	Liquid
<b>Form</b>	Aerosol
<b>Colour</b>	Off-white.
<b>Odour</b>	Hydrocarbon-like.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Vapour pressure</b>	126.689 hPa estimated
<b>Density</b>	1020 kg/m3 concentrate
<b>Vapour density</b>	Not available.
<b>Boiling point</b>	-31.8333 °C (-25.6 °F) estimated

<b>Melting point/Freezing point</b>	-189.7 °C (-310 °F) estimated / -189.7 °C (-310 °F) estimated
<b>Solubility (water)</b>	Not available.
<b>Solubility (other)</b>	Not available.
<b>Relative density</b>	0.848993 estimated
<b>Relative density</b>	0.9469 g/cm <sup>3</sup> estimated
<b>Flash point</b>	-104 °C (-155.2 °F) Pensky-Martens Closed Cup propellant
<b>Flammability limits in air, upper, % by volume</b>	9.5 % v/v estimated
<b>Flammability limits in air, lower, % by volume</b>	1.2 % v/v estimated
<b>Auto-ignition temperature</b>	260 °C (500 °F) estimated
<b>VOC</b>	81 %
<b>Percent volatile</b>	1.26544 % estimated

## 10. STABILITY AND REACTIVITY

<b>Chemical stability</b>	Risk of ignition. Material is stable under normal conditions.
<b>Conditions to avoid</b>	Heat, flames and sparks.
<b>Materials to avoid</b>	Strong oxidising agents.
<b>Hazardous decomposition products</b>	Irritants. Hydrogen fluoride. At thermal decomposition temperatures, carbon monoxide and carbon dioxide.

## 11. TOXICOLOGICAL INFORMATION

### Toxicological data

Product	Test results
Bel-Ray Super Clean Chain Lube (Mixture)	Acute Dermal LD50 Rabbit: 66667 mg/kg estimated Acute Inhalation LC50 Rat: 9383 mg/l estimated
Components	Test results
Butane (106-97-8)	Acute Inhalation LC50 Mouse: 680 mg/l 2.00 Hours Acute Inhalation LC50 Rat: 658 mg/l 4.00 Hours
N-HEXANE (110-54-3)	Acute Inhalation LC50 Mouse: 48000 mg/l 4.00 Hours Acute Oral LD50 Rat: 24 mg/kg Acute Oral LD50 Wistar rat: 49 mg/kg
Zinc oxide (1314-13-2)	Acute Inhalation LC50 Mouse: > 5.7 mg/l 4.00 Hours Acute Oral LD50 Mouse: 7950 mg/kg Acute Other LD50 Rat: 240 mg/kg
Calcium carbonate (471-34-1)	Acute Oral LD50 Rat: 6450 mg/kg
ISOBUTANE (75-28-5)	Acute Inhalation LC50 Mouse: 52 mg/l 1.00 Hours

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

<b>Routes of exposure</b>	Inhalation. Skin contact.
<b>Chronic toxicity</b>	Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Danger of serious damage to health by prolonged exposure.

### Sensitisation

#### US ACGIH Threshold Limit Values: Skin designation

N-HEXANE (CAS 110-54-3) Can be absorbed through the skin.

<b>Reproductivity</b>	Possible reproductive hazard.
<b>Local effects</b>	Harmful by inhalation. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Irritating to skin. Irritating to eyes and skin.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicological data

Product	Test results
Bel-Ray Super Clean Chain Lube (Mixture)	LC50 Fish: 227 mg/l 96.00 hours estimated

## Components

N-HEXANE (110-54-3)  
Zinc oxide (1314-13-2)  
Calcium carbonate (471-34-1)

## Test results

LC50 Fathead minnow (*Pimephales promelas*): 2.101 - 2.981 mg/l 96.00 hours  
LC50 Fathead minnow (*Pimephales promelas*): 2246 mg/l 96.00 hours  
LC50 Western mosquitofish (*Gambusia affinis*): > 56000 mg/l 96.00 hours

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

### Ecotoxicity

Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the environment.

### Environmental Effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

### Aquatic toxicity

May cause long-term adverse effects in the aquatic environment.

## 13. DISPOSAL CONSIDERATIONS

### Disposal instructions

Contents under pressure. Do not puncture, incinerate or crush. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.

### Waste from residues / unused products

Dispose of in accordance with local regulations.

### Contaminated packaging

Do not re-use empty containers.

## 14. TRANSPORT INFORMATION

### ADG

**Proper shipping name** Aerosols, flammable  
**Hazard class** 2.1  
**UN Number** 1950

### IATA

**UN Number** 1950  
**Proper shipping name** Aerosols, flammable  
**Hazard class** 2.1

### IMDG

**UN Number** 1950  
**Proper shipping name** Aerosols, flammable  
**Hazard class** 2.1



ADG



IATA



IMDG

## 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)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Non-Domestic Substances List (NDSL)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Korea	Existing Chemicals List (ECL)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
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

<b>Risk phrase(s)</b>	<p>R12 Extremely flammable.</p> <p>R38 Irritating to skin.</p> <p>R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.</p> <p>R62 Possible risk of impaired fertility.</p> <p>R67 Vapours may cause drowsiness and dizziness.</p> <p>R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</p>
<b>Disclaimer</b>	<p>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.</p>
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