MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	**Marine Silicone Lubricant**
Product Code	99707
MSDS Number	6611
Version #	3.0
Issue date	12-20-2011
Revision date	05-25-2016
Supersedes date	03-29-2016
Product use	Marine Service Lubricant

Supplier Not available.

2. Hazards Identification

Emergency overview DANGER

FLAMMABLE LIQUID AND VAPOR.
Flammable liquid - may release vapors that form flammable mixtures at or above the flash point.
CONTENTS UNDER PRESSURE.
Aerosol. Pressurized container may explode when exposed to heat or flame. Will be easily ignited by heat, spark or flames. Irritating to eyes and skin.

Irritating to respiratory system. 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.

Potential health effects

Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	Contact with eyes may cause irritation. Avoid contact with eyes.
Skin	May cause skin irritation. Avoid contact with the skin. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Inhalation	Intentional misuse by concentrating and inhaling the product can be harmful or fatal. Irritating to respiratory system. Prolonged inhalation may be harmful.
Ingestion	Exposure by ingestion of an aerosol is unlikely. Irritating. May cause nausea, stomach pain and vomiting. Small amounts of this product, if aspirated into the lungs, may cause mild to severe pulmonary injury.
Chronic effects	May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion and blurred vision) and/or damage. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Signs and symptoms	Behavioral changes. Narcosis. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Decrease in motor functions. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Potential environmental effects	May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
HEPTANE (N-HEPTANE)	142-82-5	<60
Hydrotreated Light Distillates (petroleum)	64742-47-8	<25
CARBON DIOXIDE	124-38-9	1 - 5
Other components below reportable levels		<10

Composition comments Not applicable to consumer products.

4. First Aid Measures

First aid procedures

Inhalation Move to fresh air. Get medical attention, if needed.

Skin contact Take off immediately all contaminated clothing. 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. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Never give liquid to an unconscious person.

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

5. Fire Fighting Measures

Flammable properties Flammable by OSHA criteria. Flammable by WHMIS criteria. Heat may cause the containers to explode. Vapors may travel considerable distance to a source of ignition and flash back.

Extinguishing media

Suitable extinguishing media Powder. Alcohol resistant foam. Dry chemicals. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Protection of firefighters

Specific hazards arising from the chemical Fire may produce irritating, corrosive and/or toxic gases.

Protective equipment for firefighters Firefighters should wear full protective clothing including self contained breathing apparatus.

Fire fighting equipment/instructions Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. Some of these materials, if spilled, may evaporate leaving a flammable residue.

Explosion data

Sensitivity to static discharge Not available.

Sensitivity to mechanical impact Not available.

Hazardous combustion products Carbon monoxide and carbon dioxide.

6. Accidental Release Measures

Personal precautions Consider initial downwind evacuation for at least 500 meters (1/3 mile). Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. For personal protection, see section 8 of the MSDS.

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). Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable.

Methods for cleaning up Should not be released into the environment. This product is miscible in water. Stop the flow of material, if this is without risk. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Scrub the area with detergent and water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Clean up in accordance with all applicable regulations. For waste disposal, see section 13 of the MSDS.

Other information Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. 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. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid breathing mist or vapor. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. When using do not eat or drink. Use only in area provided with appropriate exhaust ventilation. Wash thoroughly after handling. Avoid release to the environment.

Storage 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. This material can accumulate static charge which may cause spark and become an ignition source. Store in a well-ventilated place. Refrigeration recommended. Keep out of the reach of children. Keep in an area equipped with sprinklers. Use care in handling/storage. Store away from incompatible materials (see Section 10 of the MSDS).

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Components	Type	Value	Form
Hydrotreated Light Distillates (petroleum) (CAS 64742-47-8)	TWA	200 mg/m3	As Total Hydrocarbon Vapor.

US. ACGIH Threshold Limit Values

Components	Type	Value
CARBON DIOXIDE (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
HEPTANE (N-HEPTANE) (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
CARBON DIOXIDE (CAS 124-38-9)	STEL	54000 mg/m3 30000 ppm	
	TWA	9000 mg/m3 5000 ppm	
HEPTANE (N-HEPTANE) (CAS 142-82-5)	STEL	2050 mg/m3 500 ppm	
	TWA	1640 mg/m3 400 ppm	
Hydrotreated Light Distillates (petroleum) (CAS 64742-47-8)	TWA	200 mg/m3	Vapor.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
CARBON DIOXIDE (CAS 124-38-9)	STEL	15000 ppm	
	TWA	5000 ppm	
HEPTANE (N-HEPTANE) (CAS 142-82-5)	STEL	500 ppm	
	TWA	400 ppm	
Hydrotreated Light Distillates (petroleum) (CAS 64742-47-8)	TWA	200 mg/m3	Non-aerosol.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
CARBON DIOXIDE (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
HEPTANE (N-HEPTANE) (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
CARBON DIOXIDE (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
HEPTANE (N-HEPTANE) (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
CARBON DIOXIDE (CAS 124-38-9)	STEL	54000 mg/m3
		30000 ppm
	TWA	9000 mg/m3
		5000 ppm
HEPTANE (N-HEPTANE) (CAS 142-82-5)	STEL	2050 mg/m3
		500 ppm
	TWA	1640 mg/m3
		400 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
CARBON DIOXIDE (CAS 124-38-9)	PEL	9000 mg/m3
		5000 ppm
HEPTANE (N-HEPTANE) (CAS 142-82-5)	PEL	2000 mg/m3
		500 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Canada - Alberta OELs: Skin designation

Hydrotreated Light Distillates (petroleum) (CAS 64742-47-8)	Can be absorbed through the skin.

Canada - British Columbia OELs: Skin designation

Hydrotreated Light Distillates (petroleum) (CAS 64742-47-8)	Can be absorbed through the skin.

Canada - Ontario OELs: Skin designation

Hydrotreated Light Distillates (petroleum) (CAS 64742-47-8)	Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation

Hydrotreated Light Distillates (petroleum) (CAS 64742-47-8)	Can be absorbed through the skin.

Engineering 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. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection Wear suitable protective clothing.

Respiratory protection If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

Hand protection Wear protective gloves.

9. Physical & Chemical Properties

Appearance	Oily.
Physical state	Liquid.
Form	Aerosol.
Color	Translucent. White.
Odor	Petroleum
Odor threshold	Not available.
pH	Not available.
Vapor pressure	2542.83 hPa estimated
Density	595.00 kg/m³
Vapor density	Not available.
Boiling point	208.4 °F (98 °C)
Melting point/Freezing point	-131.08 °F (-90.6 °C) estimated
Solubility (water)	Negligible
Solubility (other)	Hydrocarbons
Specific gravity	0.6
Relative density	Not available.
Flash point	30.2 °F (-1.0 °C) Pensky-Martens Closed Cup
Flammability limits in air, upper, % by volume	5 % estimated
Flammability limits in air, lower, % by volume	0.7 % estimated
Auto-ignition temperature	Not available.
VOC	59.1 %
Evaporation rate	Not available.
Viscosity	2.57 cSt ASTM D445
Viscosity temperature	104 °F (40 °C)
Percent volatile	59.1 %
Partition coefficient (n-octanol/water)	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Risk of explosion.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.

Hazardous decomposition products	Irritants. At thermal decomposition temperatures, carbon monoxide and carbon dioxide.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Product	Species	Test Results
Marine Silicone Lubricant		
Acute		
Dermal		
LD50	Rabbit	70000 g/kg estimated
Inhalation		
LC50	Rat	174 mg/l, 4 Hours estimated
LD50	Mouse	127 mg/l, 2 Hours estimated
Oral		
LD50	Guinea pig	8200 g/kg estimated
	Mouse	33333 g/kg estimated
	Rabbit	8271 g/kg estimated
	Rat	19467 g/kg estimated

Components	Species	Test Results
HEPTANE (N-HEPTANE) (CAS 142-82-5)		
Acute		
Inhalation		
LC50	Rat	103 mg/l, 4 Hours
LD50	Mouse	75 mg/l, 2 Hours

Acute effects	Respiratory tract irritation.
Sensitization	Not available.
Chronic effects	Not expected to be hazardous by WHMIS criteria. Prolonged inhalation may be harmful. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood.
Carcinogenicity	Not available.
Skin corrosion/irritation	Not available.
Serious eye damage/irritation	Not available.
Mutagenicity	Not available.
Reproductive effects	Not available.
Teratogenicity	Not available.
Synergistic materials	Not available.

12. Ecological Information

Ecotoxicological data

Product		Species	Test Results
Marine Silicone Lubricant			
Aquatic			
Fish	LC50	Fish	11.3103 mg/l, 96 hours estimated

Components		Species	Test Results
HEPTANE (N-HEPTANE) (CAS 142-82-5)			
Aquatic			
Fish	LC50	Mozambique tilapia (Tilapia mossambica)	375 mg/l, 96 hours

Components		Species	Test Results
Hydrotreated Light Distillates (petroleum) (CAS 64742-47-8)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.9 mg/l, 96 hours

Ecotoxicity Contains a substance which causes risk of hazardous effects to the environment.

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

Aquatic toxicity Not available.

Persistence and degradability Not available.

Partition coefficient

HEPTANE (N-HEPTANE) 4.66

Mobility in environmental media This product is miscible in water.

13. Disposal Considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport Information

TDG

UN number UN1950

UN proper shipping name AEROSOLS, flammable (HEPTANE (N-HEPTANE), Solvent Naphtha, Petroleum, Light Aliphatic)

Transport hazard class(es)

Class 2.1

Subsidiary risk -

Packing group Not applicable.

Environmental hazards D

Special precautions for user Read safety instructions, MSDS and emergency procedures before handling.

IATA

UN number UN1950

UN proper shipping name Aerosols, flammable (HEPTANE (N-HEPTANE), Solvent Naphtha, Petroleum, Light Aliphatic)

Transport hazard class(es)

Class 2.1

Subsidiary risk -

Packing group Not applicable.

Environmental hazards No.

ERG Code 10L

Special precautions for user Read safety instructions, MSDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft Allowed with restrictions.

Cargo aircraft only Allowed with restrictions.

IMDG

UN number UN1950

UN proper shipping name AEROSOLS (HEPTANE (N-HEPTANE), Solvent Naphtha, Petroleum, Light Aliphatic)

Transport hazard class(es)

Class 2.1

Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available.

IATA; IMDG

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	B2 - Flammable Liquids D2B - Other Toxic Effects-TOXIC

WHMIS labeling

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
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)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information

HMIS® ratings	Health: 2* Flammability: 3 Physical hazard: 0

NFPA ratings	Health: 2 Flammability: 3 Instability: 0
Disclaimer	Bel-Ray Company, LLC 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.
Prepared by	Not available.