1. Product and Company Identification

Material name: Bel-Ray EXS Synthetic Ester 4T Engine Oil 10W-50
Product Code: 99160
MSDS Number: 6630
Version #: 3.0
Revision date: 08-30-2013
Product use: 4T Motorcycle Engine Oil
Manufacturer information: Bel-Ray Company, Inc.
P.O. Box 526
Farmingdale, NJ 07727
United States
customerservice@belray.com
www.belray.com/msds_search
+1 732 938 2421
CHEMTREC: +1 703-527-3887 (outside USA)
CHEMTREC: 800-424-9300 (USA)

2. Hazards Identification

Emergency overview: WARNING
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.

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. May cause skin irritation in susceptible persons. Avoid contact with the skin.

Inhalation
May cause irritation of respiratory tract. Prolonged inhalation may be harmful.

Ingestion
Irritating. May cause nausea, stomach pain and vomiting.

Chronic effects
Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Signs and symptoms
Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Potential environmental effects
May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Non-hazardous components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>OIL, MINERAL</td>
<td>64742-52-5</td>
<td>0 - 20</td>
</tr>
<tr>
<td>OIL, MINERAL</td>
<td>64742-71-8</td>
<td>0 - 20</td>
</tr>
<tr>
<td>OIL, MINERAL</td>
<td>8042-47-5</td>
<td>0 - 20</td>
</tr>
</tbody>
</table>

Other components below reportable levels

Composition comments: Not applicable to consumer products.

4. First Aid Measures

First aid procedures

Eye contact
Flush eyes immediately with large amounts of water. 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.
Skin contact
Remove and isolate contaminated clothing and shoes. Wash off immediately with soap and 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
Never give anything by mouth to a victim who is unconscious or is having convulsions. 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.

General advice
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Call a physician if symptoms develop or persist. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures
Flammable properties
Not flammable by WHMIS criteria.

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

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

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

Fire fighting equipment/instructions
Not available.

Explosion data
Sensitivity to static discharge
Not available.

Sensitivity to mechanical impact
Not available.

Hazardous combustion products
May include oxides of nitrogen. Carbon monoxide and carbon dioxide.

6. Accidental Release Measures
Personal precautions
Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak. 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
Stop leak if you can do so 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: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Other information
Never return spills in original containers for re-use. Clean up in accordance with all applicable regulations. For waste disposal, see section 13 of the MSDS.

Clean up in accordance with all applicable regulations.

7. Handling and Storage
Handling
Avoid breathing mist or vapor. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. When using do not eat or drink. Avoid release to the environment.

Storage
Room temperature - normal conditions. Store in a closed container away from incompatible materials. Keep out of the reach of children. Use care in handling/storage.
8. Exposure Controls / Personal Protection

### Occupational exposure limits

<table>
<thead>
<tr>
<th>ACGIH Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), Hydrotreated Heavy Naphthenic (64742-52-5)</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Inhalable Fraction.</td>
</tr>
</tbody>
</table>

### US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraffin Oils (petroleum), Catalytic Dewaxed Light (64742-71-8)</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>White Mineral Oil (petroleum) (8042-47-5)</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Inhalable fraction.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Mineral Oil (petroleum) (8042-47-5)</td>
<td>STEL</td>
<td>10 mg/m3</td>
<td>Mist.</td>
</tr>
<tr>
<td>Paraffin Oils (petroleum), Catalytic Dewaxed Light (64742-71-8)</td>
<td>STEL</td>
<td>10 mg/m3</td>
<td>Mist.</td>
</tr>
<tr>
<td>Distillates (petroleum), Hydrotreated Heavy Naphthenic (64742-52-5)</td>
<td>STEL</td>
<td>10 mg/m3</td>
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</tr>
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<td>Paraffin Oils (petroleum), Catalytic Dewaxed Light (64742-71-8)</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Mist.</td>
</tr>
<tr>
<td>White Mineral Oil (petroleum) (8042-47-5)</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Mist.</td>
</tr>
<tr>
<td>Distillates (petroleum), Hydrotreated Heavy Naphthenic (64742-52-5)</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Mist.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Mineral Oil (petroleum) (8042-47-5)</td>
<td>STEL</td>
<td>10 mg/m3</td>
<td>Mist.</td>
</tr>
<tr>
<td>Paraffin Oils (petroleum), Catalytic Dewaxed Light (64742-71-8)</td>
<td>STEL</td>
<td>10 mg/m3</td>
<td>Mist.</td>
</tr>
<tr>
<td>Distillates (petroleum), Hydrotreated Heavy Naphthenic (64742-52-5)</td>
<td>STEL</td>
<td>10 mg/m3</td>
<td>Mist.</td>
</tr>
<tr>
<td>Paraffin Oils (petroleum), Catalytic Dewaxed Light (64742-71-8)</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Mist.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Mineral Oil (petroleum) (8042-47-5)</td>
<td>TWA</td>
<td>1 mg/m3</td>
<td>Mist.</td>
</tr>
<tr>
<td>Paraffin Oils (petroleum), Catalytic Dewaxed Light (64742-71-8)</td>
<td>STEL</td>
<td>10 mg/m3</td>
<td>Mist.</td>
</tr>
<tr>
<td>White Mineral Oil (petroleum) (8042-47-5)</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Mist.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Mineral Oil (petroleum) (8042-47-5)</td>
<td>STEL</td>
<td>10 mg/m3</td>
<td>Mist.</td>
</tr>
<tr>
<td>Paraffin Oils (petroleum), Catalytic Dewaxed Light (64742-71-8)</td>
<td>STEL</td>
<td>10 mg/m3</td>
<td>Mist.</td>
</tr>
<tr>
<td>Distillates (petroleum), Hydrotreated Heavy Naphthenic (64742-52-5)</td>
<td>STEL</td>
<td>10 mg/m3</td>
<td>Mist.</td>
</tr>
<tr>
<td>Paraffin Oils (petroleum), Catalytic Dewaxed Light (64742-71-8)</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Mist.</td>
</tr>
</tbody>
</table>
Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Mineral Oil (petroleum) (8042-47-5)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td>Distillates (petroleum), Hydrotreated Heavy Naphthenic (64742-52-5)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Mist.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), Hydrotreated Heavy Naphthenic (64742-52-5)</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td>Paraffin Oils (petroleum), Catalytic Dewaxed Light (64742-71-8)</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td>White Mineral Oil (petroleum) (8042-47-5)</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td>Distillates (petroleum), Hydrotreated Heavy Naphthenic (64742-52-5)</td>
<td>PEL</td>
<td>2000 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

9. Physical & Chemical Properties

**Appearance**
- Oily.

**Physical state**
- Liquid.

**Form**
- Liquid.

**Color**
- Amber.

**Odor**
- Petroleum

**Odor threshold**
- Not available.

**pH**
- Not available.

**Vapor pressure**
- 0.000011 hPa estimated

**Density**
- 865.00 kg/m³

**Vapor density**
- Not available.

**Boiling point**
- > 482 °F (> 250 °C)

**Melting point/Freezing point**
- Not available.

**Solubility (water)**
- Negligible

**Solubility (other)**
- Hydrocarbon Solvents

**Specific gravity**
- 0.865

**Relative density**
- Not available.

**Flash point**
- 374.00 °F (190.00 °C) Pensky-Martens Closed Cup

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.

Personal protective equipment

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

**Skin protection**
Wear suitable protective clothing.

**Respiratory protection**
Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.
### 10. Chemical Stability & Reactivity Information

**Chemical stability**
Material is stable under normal conditions.

**Conditions to avoid**
Avoid temperatures exceeding the flash point.

**Incompatible materials**
Not available.

**Hazardous decomposition products**
Nitrogen oxides (NOx). At thermal decomposition temperatures, carbon monoxide and carbon dioxide.

### 11. Toxicological Information

**Toxicological data**

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bel-Ray EXS Synthetic Ester 4T Engine Oil 10W-50 (Mixture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>3332.2227 mg/kg, estimated</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>10000 mg/m³, estimated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>618 mg/l, estimated</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>3311.2583 mg/kg, estimated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1182.0331 g/kg, estimated</td>
</tr>
</tbody>
</table>

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

**Local effects**
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Contact with eyes may cause irritation. May cause skin irritation.

**Chronic effects**
Prolonged inhalation may be harmful. Not expected to be hazardous by WHMIS criteria.

**Carcinogenicity**
Due to lack of data the classification is not possible.

**ACGIH Carcinogens**
- OIL, MINERAL MINERAL OIL, EXCLUDING METAL WORKING FLUIDS, PURE, HIGHLY AND SEVERELY REFINED, INHALABLE FRACTION (CAS 64742-52-5) A4 Not classifiable as a human carcinogen.
- OIL, MINERAL MINERAL OIL, EXCLUDING METAL WORKING FLUIDS, PURE, HIGHLY AND SEVERELY REFINED, INHALABLE FRACTION (CAS 64742-71-8) A4 Not classifiable as a human carcinogen.
- OIL, MINERAL MINERAL OIL, EXCLUDING METAL WORKING FLUIDS, PURE, HIGHLY AND SEVERELY REFINED, INHALABLE FRACTION (CAS 8042-47-5) A4 Not classifiable as a human carcinogen.

**IARC Monographs. Overall Evaluation of Carcinogenicity**
- MINERAL OILS, HIGHLY-REFINED (CAS 8042-47-5) 3 Not classifiable as to carcinogenicity to humans.

**Mutagenicity**
Due to lack of data the classification is not possible.

**Reproductive effects**
Due to lack of data the classification is not possible.
12. Ecological Information

<table>
<thead>
<tr>
<th>Ecotoxicological data</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bel-Ray EXS Synthetic Ester 4T Engine Oil 10W-50 (Mixture)</td>
<td>Crustacea</td>
<td>EC50</td>
</tr>
<tr>
<td></td>
<td>Fish</td>
<td>LC50</td>
</tr>
</tbody>
</table>

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

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.
Persistence and degradability Not available.
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. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

TDG Not regulated as dangerous goods.
IATA Not regulated as dangerous goods.
IMDG Not regulated as dangerous goods.

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 Non-controlled

Inventory status

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/ no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings

<table>
<thead>
<tr>
<th>Rating</th>
<th>Health</th>
<th>Flammability</th>
<th>Physical hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1*</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

NFPA ratings

<table>
<thead>
<tr>
<th>Rating</th>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

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

This document has undergone significant changes and should be reviewed in its entirety.