
SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Trade name: Premium Blue™ Heavy Duty Diesel SAE 15W-40 Engine Oil

™ Trademark, Valvoline or its subsidiaries, registered in various countries

Relevant identified uses of the substance or mixture and uses advised against

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

GHS label elements
This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Hazardous components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), solvent-dewaxed heavy paraffinic</td>
<td>64742-65-0</td>
<td>Not a hazardous substance or mixture</td>
<td>5.2547</td>
</tr>
<tr>
<td>HYDROTREATED LIGHT PARAFFINIC DISTILLATE</td>
<td>64742-55-8</td>
<td>Asp. Tox. 1; H304</td>
<td>1.1945</td>
</tr>
<tr>
<td>Phosphorodithioic acid, mixed</td>
<td>113706-15-3</td>
<td>Skin Irrit. 2; H315</td>
<td>1.036</td>
</tr>
</tbody>
</table>
SECTION 4. FIRST AID MEASURES

General advice : No hazards which require special first aid measures.

If inhaled : If breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.

In case of eye contact : Remove contact lenses. Protect unharmed eye.

If swallowed : Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed : Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:

- stomach or intestinal upset (nausea, vomiting, diarrhea)
- irritation (nose, throat, airways)

Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES
Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, Foam, Carbon dioxide (CO2), Dry chemical.

Specific hazards during firefighting: Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products: Carbon dioxide and carbon monoxide, Hydrocarbons, Nitrogen oxides (NOx), Sulphur oxides, Hydrogen sulfide, Mercaptans, Zinc oxide.

Specific extinguishing methods: Product is compatible with standard fire-fighting agents.

Further information: Standard procedure for chemical fires.

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

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

Methods and materials for containment and cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

Other information: Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling: Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8.
Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROTREATED LIGHT</td>
<td>64742-55-8</td>
<td>TWA</td>
<td>5 mg/m³ Mist</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td>PARAFFINIC DISTILLATE</td>
<td></td>
<td>TWA</td>
<td>5 mg/m³ Inhalable fraction</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m³ Mist</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m³ Mist</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST</td>
<td>10 mg/m³ Mist</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL</td>
<td>5 mg/m³ particulate</td>
<td>CAL PEL</td>
</tr>
</tbody>
</table>

Hazardous components without workplace control parameters

Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment supplier). Wear as appropriate: Safety shoes

Hygiene measures : General industrial hygiene practice.
### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>amber</td>
</tr>
<tr>
<td>Odour</td>
<td>hydrocarbon-like</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>&gt; 424.9 °F / 218.3 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 199 °C</td>
</tr>
<tr>
<td>Method</td>
<td>Cleveland open cup</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>6 %(V)</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>1 %(V)</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>0.013333 hPa (21.11 °C)</td>
</tr>
<tr>
<td>Calulated Vapor Pressure</td>
<td></td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>0.880 g/cm³ (15.56 °C)</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>insoluble</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-ocantol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>115 mm²/s (40 °C)</td>
</tr>
</tbody>
</table>
Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.
Chemical stability : Stable under recommended storage conditions.
Possibility of hazardous reactions : Product will not undergo hazardous polymerization.
Conditions to avoid : excessive heat
Incompatible materials : Acids
Strong oxidizing agents
water
Hazardous decomposition products : carbon dioxide and carbon monoxide
Hydrocarbons
hydrogen sulfide
Nitrogen oxides (NOx)
Sulphur oxides
zinc oxide
mercaptans

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity
Not classified based on available information.

Components:
Distillates (petroleum), solvent-dewaxed heavy paraffinic:
Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:
Acute oral toxicity : LD50 (Rat): 2,900 mg/kg
Remarks: Information given is based on data obtained from similar substances.
Acute dermal toxicity: LD50 (Rabbit): > 2,000 mg/kg
Assessment: Not classified as acutely toxic by dermal absorption under GHS.
Remarks: Information given is based on data obtained from similar substances.

Skin corrosion/irritation
Not classified based on available information.
Components:
- Distillates (petroleum), solvent-dewaxed heavy paraffinic:
  Result: Slight, transient irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:
Result: Slight, transient irritation

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:
Result: Corrosive
Remarks: Information given is based on data obtained from similar substances.

Serious eye damage/eye irritation
Not classified based on available information.
Product:
Remarks: Unlikely to cause eye irritation or injury.
Components:
- Distillates (petroleum), solvent-dewaxed heavy paraffinic:
  Result: Slight, transient irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:
Result: Slight, transient irritation

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:
Result: Corrosive
Remarks: Information given is based on data obtained from similar substances.

Respiratory or skin sensitisation
Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.
Components:
- Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:
  Test Type: Buehler Test
  Species: Guinea pig
  Assessment: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity
Not classified based on available information.
Components:
- Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:
  Genotoxicity in vitro: Remarks: In vitro tests showed mutagenic effects which were not observed with in vivo test.
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™ Trademark, Valvoline or its subsidiaries, regisred in various
countries
773780

Genotoxicity in vivo:
Test Type: chromosome aberration assay
Test species: Mouse
Cell type: peripheral blood cells
Result: negative

Carcinogenicity:
Not classified based on available information.

Reproductive toxicity:
Not classified based on available information.

Components:
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts:

Effects on fertility:
Species: Rat
Application Route: Oral
Dose: 100 mg/kg bw/day
Symptoms: No effects on reproduction parameters

Effects on foetal development:
Species: Rat
Application Route: Oral
Developmental Toxicity: No observed adverse effect level F1: 100 mg/kg body weight

STOT - single exposure:
Not classified based on available information.

STOT - repeated exposure:
Not classified based on available information.

Aspiration toxicity:
Not classified based on available information.

Product:
No aspiration toxicity classification

Components:
HYDROTREATED LIGHT PARAFFINIC DISTILLATE:
May be fatal if swallowed and enters airways.

Further information:

Product:
Remarks: No data available

Carcinogenicity:
IARC:
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA:
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP:
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:
Ecotoxicology Assessment
Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

Components:
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isoctyl) esters, zinc salts:
Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l
Exposure time: 96 h
Remarks: Information given is based on data obtained from similar substances.

Persistence and degradability
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isoctyl) esters, zinc salts:
Biodegradability : Result: Not readily biodegradable.
Remarks: Information given is based on data obtained from similar substances.

No data available
Bioaccumulative potential
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isoctyl) esters, zinc salts:
Bioaccumulation : Bioconcentration factor (BCF): 3
Remarks: Information given is based on data obtained from similar substances.

No data available
Mobility in soil
No data available
Other adverse effects
No data available
Product:
Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
## SECTION 14. TRANSPORT INFORMATION

**International transport regulations**

<table>
<thead>
<tr>
<th>REGULATION</th>
<th>ID NUMBER</th>
<th>PROPER SHIPPING NAME</th>
<th>*HAZARD CLASS</th>
<th>SUBSIDIARY HAZARDS</th>
<th>PACKING GROUP</th>
<th>MARINE POLLUTANT / LTD. QTY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. DOT - ROAD</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFR_RAIL_C</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. DOT - INLAND WATERWAYS</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDG_ROAD_C</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDG_RAIL_C</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDG_INWT_C</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTERNATIONAL MARITIME DANGEROUS GOODS</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MX_DG</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID*
Marine pollutant | no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards : No SARA Hazards

SARA 313

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isoctyl) esters, zinc salts

113706-15-3 1.03 %

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>On TSCA Inventory</td>
</tr>
<tr>
<td>DSL</td>
<td>All components of this product are on the Canadian DSL</td>
</tr>
<tr>
<td>AICS</td>
<td>Not in compliance with the inventory</td>
</tr>
<tr>
<td>ENCS</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>KECI</td>
<td>Not in compliance with the inventory</td>
</tr>
<tr>
<td>PICCS</td>
<td>Not in compliance with the inventory</td>
</tr>
<tr>
<td>IECSC</td>
<td>Not in compliance with the inventory</td>
</tr>
</tbody>
</table>

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information
Revision Date: 09/23/2016

NFPA: | HMIS III:
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Premium Blue™ Heavy Duty Diesel SAE 15W-40 Engine Oil
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NFPA Flammable and Combustible Liquids Classification
Combustible Liquid Class IIIB

Full text of H-Statements
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Sources of key data used to compile the Safety Data Sheet
Valvoline internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet:
ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the “International Air Transport Association” (IATA).