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SAFETY DATA SHEET		Revision Date: 05/22/2017
		Print Date: 12/7/2017
		SDS Number: R0306034
Premium Blue™ 8600 ES SAE 15W-40 Diesel Engine Oil ™ Trademark, Valvoline or its subsidiaries, registered in various countries 773780		Version: 1.7

29 CFR 1910.1200 (OSHA HazCom 2012)
SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Trade name : Premium Blue™ 8600 ES SAE 15W-40 Diesel Engine Oil
™ Trademark, Valvoline or its subsidiaries, registered in various countries

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL Product Information 1-800-TEAMVAL
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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

Chemical name	CAS-No.	Classification	Concentration (%)
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).	5.2547

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HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	Asp. Tox. 1; H304	1.1945
ZINC BIS[O-(6- METHYLHELPTYL)]BIS[O-SEC- BUTYL)]BIS(DITHIOPHOSPATE)	93819-94-4	Skin Irrit. 2; H315 Eye Dam. 1; H318	1.036

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)

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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 (NO_x)
 zinc oxide
 Sulphur oxides
 hydrogen sulfide
 mercaptans
- 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.

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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

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

Hazardous components without workplace control parameters

Components	CAS-No.
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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

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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

Physical state : liquid

Colour : amber

Odour : hydrocarbon-like

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : > 424.9 °F / 218.3 °C

Flash point : > 390 °F / > 199 °C
 Method: Cleveland open cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit : 6 %(V)
 Calculated Explosive Limit

Lower explosion limit : 1 %(V)
 Calculated Explosive Limit

Vapour pressure : 0.0133333 hPa (21.11 °C)
 Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 0.880 g/cm³ (15.56 °C)

Solubility(ies)
 Water solubility : insoluble

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Solubility in other solvents : No data available

Partition coefficient: n-
 octanol/water : No data available

Thermal decomposition : No data available

Viscosity
 Viscosity, dynamic : No data available

Viscosity, kinematic : 115 mm²/s (40 °C)

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 : Strong oxidizing agents

Hazardous decomposition
 products carbon dioxide and carbon monoxide
 Hydrocarbons
 hydrogen sulfide
 Nitrogen oxides (NO_x)
 Sulphur oxides
 zinc oxide fumes
 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.

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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

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPATE):

Acute oral toxicity : LD50 (Rat): 2,600 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg

Method: OECD Test Guideline 402

Assessment: Not classified as acutely toxic by dermal
absorption under GHS.**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

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPATE):

Species: Guinea pig

Method: OECD Test Guideline 404

Result: Irritating to skin.

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

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPATE):

Species: Rabbit

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.

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Components:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Test Type: Buehler Test

Species: Guinea pig

Assessment: Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Components:

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Genotoxicity in vitro : Test Type: Ames test

Test species: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Remarks: Information given is based on data obtained from similar substances.

Genotoxicity in vivo

: Test Type: Micronucleus test

Test species: Mouse

Method: OECD Test Guideline 474

Result: negative

Remarks: Information given is based on data obtained from similar substances.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

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:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

No aspiration toxicity classification

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

May be fatal if swallowed and enters airways.

Further information**Product:**

Remarks: No data available

Carcinogenicity:

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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:

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
 Exposure time: 96 h
 Test Type: static test
 Test substance: WAF

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
 Exposure time: 48 h
 Test Type: static test
 Test substance: WAF

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (algae)): >= 100 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test
 Test substance: WAF

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPHATE):

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l
 Exposure time: 96 h
 Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Daphnia magna)): 5.4 mg/l
 Exposure time: 48 h
 Test Type: static test

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Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 2.1 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test

Persistence and degradability**Components:**

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Biodegradability : Result: Inherently biodegradable.
Method: OECD Test Guideline 301F

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPATE):

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 1.5 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

No data available

Bioaccumulative potential**Components:**

ZINC BIS[O-(6-METHYLHELPTYL)]BIS[O-SEC-BUTYL]BIS(DITHIOPHOSPATE):

Partition coefficient: n- : log Pow: 0.59 - 1.2 (23 °C)
octanol/water

No data available

Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:

Additional ecological : No data available
information

Components:

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**

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REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

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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**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ETHYLENEDIAMINE	107-15-3	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ETHYLENEDIAMINE	107-15-3	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards**SARA 313**

ZINC BIS[O-(6-METHYLHEPTYL)]BIS[O-
-SEC-BUTYL)]BIS(DITHIOPHOS
PATE) 93819-94-4 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:

DSL : All components of this product are on the Canadian DSL

AICS : Not in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : Not in compliance with the inventory

TSCA : On TSCA Inventory



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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

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NFPA:	HMIS III:						
Flammability Health Instability Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>0</td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	0	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

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).

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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).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System