SAFETY DATA SHEET

MaxLife™ DEX/MERC Multi Vehicle Automatic Transmission Fluid
™ Trademark, Valvoline or its subsidiaries, registered in various countries
VV324


SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Trade name : MaxLife™ DEX/MERC Multi Vehicle Automatic Transmission Fluid
™ Trademark, Valvoline or its subsidiaries, registered in various countries

Relevant identified uses of the substance or mixture and uses advised against
Recommended use : Lubricant

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 (1-800-832-6825)

Emergency telephone number
1-800-VALVOLINE (1-800-825-8654)

Regulatory Information Number
1-800-TEAMVAL (1-800-832-6825)

Product Information
1-800-TEAMVAL (1-800-832-6825)

SDS@valvoline.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Not a hazardous substance or mixture.

GHS label elements
Not a hazardous substance or mixture.

Other hazards
The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 10.2 %

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)</td>
<td>64742-54-7</td>
<td>Asp. Tox. 1; H304</td>
<td>&gt;=70.00 - &lt; 80.00</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 : No symptoms known or expected.

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

Further information: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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 product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

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.

Conditions for safe storage: Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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</th>
<th>Control</th>
<th>Basis</th>
</tr>
</thead>
</table>

3 / 14
<table>
<thead>
<tr>
<th>(Form of exposure)</th>
<th>parameters / Permissible concentration</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (Petroleum), Hydrotreated Heavy Paraffinic</td>
<td>64742-54-7</td>
<td>TWA 5 mg/m3 Mist OSHA Z-1</td>
</tr>
<tr>
<td>TWA 5 mg/m3 Inhalable fraction ACGIH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA 5 mg/m3 Mist OSHA P0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA 5 mg/m3 Mist NIOSH REL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST 10 mg/m3 Mist NIOSH REL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEL 5 mg/m3 particulate CAL PEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUBRICATING OILS, PETROLEUM, C15-30, HYDROTREATED</td>
<td>72623-86-0</td>
<td>TWA 5 mg/m3 Mist OSHA Z-1</td>
</tr>
<tr>
<td>TWA 5 mg/m3 Inhalable fraction ACGIH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA 5 mg/m3 Mist OSHA P0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA 5 mg/m3 Mist NIOSH REL</td>
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<td>ST 10 mg/m3 Mist NIOSH REL</td>
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<td></td>
</tr>
<tr>
<td>PEL 5 mg/m3 particulate CAL PEL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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**: Respiratory protection is not required under normal conditions of use.

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)
Hygiene measures: General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: liquid
Colour: red
Odour: mild
Odour Threshold: No data available
pH: No data available
Melting point/freezing point: No data available
Boiling point/boiling range: > 424 °F / 218 °C
(1013 hPa)
Flash point: 394 - 480 °F / 201 - 249 °C
Method: Cleveland open cup
Evaporation rate: < 1
Ethyl Ether
Flammability (solid, gas): No data available
Upper explosion limit: No data available
Lower explosion limit: No data available
Vapour pressure: 1 hPa Calculated Vapor Pressure
Relative vapour density: > 1 AIR=1
Relative density: No data available
Density: 0.8518 g/cm³ (15.56 °C)
Solubility(ies)
Water solubility: No data available
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: 28.8 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: None known.
Incompatible materials: alkalis
Strong acids
Strong oxidizing agents
Hazardous decomposition products: No hazardous decomposition products are known.

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), Hydrotreated Heavy Paraffinic:
Acute oral toxicity: LD50 (Rat): > 15 g/kg
Acute dermal toxicity: LD50 (Rabbit): > 5 g/kg

LUBRICATING OILS, PETROLEUM, C15-30, HYDROTREATED:
Acute oral toxicity  :  LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity  :  LC50 (Rat): > 5.58 mg/l
  Exposure time: 4 h
  Test atmosphere: dust/mist
  Assessment: Not classified as acutely toxic by inhalation under GHS.
  Remarks: No mortality observed at this dose.

Acute dermal toxicity  :  LD50 (Rabbit): > 5,000 mg/kg
  Remarks: No mortality observed at this dose.

Skin corrosion/irritation
Not classified based on available information.

**Components:**

**Distillates (Petroleum), Hydrotreated Heavy Paraffinic:**
  Assessment  :  Slight, transient irritation
  Result  :  Slight, transient irritation

**LUBRICATING OILS, PETROLEUM, C15-30, HYDROTREATED:**
  Species  :  Rabbit
  Result  :  No skin irritation

Serious eye damage/eye irritation
Not classified based on available information.

**Product:**
  Result  :  Slight, transient irritation
  Remarks  :  Expected based on components.

Remarks  :  Unlikely to cause eye irritation or injury.

**Components:**

**Distillates (Petroleum), Hydrotreated Heavy Paraffinic:**
  Result  :  No eye irritation
  Assessment  :  No eye irritation

**LUBRICATING OILS, PETROLEUM, C15-30, HYDROTREATED:**
  Species  :  Rabbit
  Result  :  No eye irritation

Respiratory or skin sensitisation
Skin sensitisation
Not classified based on available information.

Respiratory sensitisation
Not classified based on available information.

**Components:**

**LUBRICATING OILS, PETROLEUM, C15-30, HYDROTREATED:**
  Test Type  :  Buehler Test
  Species  :  Guinea pig
  Assessment  :  Does not cause skin sensitisation.
**Germ cell mutagenicity**
Not classified based on available information.

**Carcinogenicity**
Not classified based on available information.

**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 on OSHA’s list of regulated carcinogens.

**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.

**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), Hydrotreated Heavy Paraffinic:**
  May be fatal if swallowed and enters airways.

**LUBRICATING OILS, PETROLEUM, C15-30, HYDROTREATED:**
The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

May be fatal if swallowed and enters airways.

**Further information**

**Product:**

**Remarks:**
No data available

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Product:**

Ecotoxicology Assessment

- **Short-term (acute) aquatic hazard:** Acute aquatic toxicity Category 2; Toxic to aquatic life.

- **Long-term (chronic) aquatic:** Chronic aquatic toxicity Category 3; Harmful to aquatic life
hazard with long lasting effects.

**Components:**
Distillates (Petroleum), Hydrotreated Heavy Paraffinic:
- Toxicity to fish: LL50 (Fish): > 100 mg/l
  Exposure time: 96 h

- Toxicity to daphnia and other aquatic invertebrates: EL50 (Aquatic invertebrates): > 10,000 mg/l
  Exposure time: 48 h

- Toxicity to algae: EL50 (Algae, algal mat (Algae)): > 100 mg/l
  Exposure time: 72 h

- Toxicity to fish (Chronic toxicity): NOEC (Fish): 10 mg/l

- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Aquatic invertebrates): 10 mg/l

Ecotoxicology Assessment:
- Short-term (acute) aquatic hazard: Not classified based on available information.
- Long-term (chronic) aquatic hazard: Not classified based on available information.

**LUBRICATING OILS, PETROLEUM, C15-30, HYDROTREATED:**
- Toxicity to fish: LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
  Exposure time: 96 h
  Test Type: static test
  Test substance: WAF
  Method: OECD Test Guideline 203
  Remarks: No toxicity at the limit of solubility

- 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
  Method: OECD Test Guideline 202

- Toxicity to algae: NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
  End point: Growth inhibition
  Exposure time: 72 h
  Test Type: static test
  Test substance: WAF
  Method: OECD Test Guideline 201

- Toxicity to fish (Chronic): NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated >=
toxicity) 1,000 mg/l
Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
NOEL (Daphnia (water flea)): 10 mg/l
Exposure time: 21 d
Test substance: WAF
Method: OECD Test Guideline 211

Persistence and degradability
**Components:**
LUBRICATING OILS, PETROLEUM, C15-30, HYDROTREATED:
Biodegradability: Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

No data available
**Bioaccumulative potential**
**Components:**
No data available
**Mobility in soil**
**Components:**
No data available
**Other adverse effects**
No data available

**Product:**
**Additional ecological information:**
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life with long lasting effects.

**SECTION 13. DISPOSAL CONSIDERATIONS**

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

The product should not be allowed to enter drains, water courses or the soil.

**Contaminated packaging:** Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

**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>
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<td></td>
<td></td>
</tr>
<tr>
<td>TDG_ROAD_C</td>
<td></td>
<td>Not dangerous goods</td>
<td></td>
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<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>
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<td></td>
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<tr>
<td>INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO</td>
<td></td>
<td>Not dangerous goods</td>
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</tr>
<tr>
<td>INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER</td>
<td></td>
<td>Not dangerous goods</td>
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<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

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>XYLENE</td>
<td>1330-20-7</td>
<td>100</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SULFUR DIOXIDE</td>
<td>7446-09-5</td>
<td>500</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards: No SARA Hazards

California Prop. 65

This product contains a chemical that is at or below California Propositions 65’s "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65’s "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

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

- DSL: All components of this product are on the Canadian DSL
- AICS: On the inventory, or in compliance with the inventory
- ENCS: On the inventory, or in compliance with the inventory
- KECI: On the inventory, or in compliance with the inventory
- PICCS: On the inventory, or in compliance with the inventory
- IECSC: On the inventory, or in compliance with the inventory
- TCSI: On the inventory, or in compliance with the inventory
- TSCA: On TSCA Inventory
TSCA list
No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information
Revision Date: 09/20/2018

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

NFPA Flammable and Combustible Liquids Classification
Combustible Liquid Class IIIB

Full text of H-Statements
H304 May be fatal if swallowed and enters airways.

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)
- ICAO: International Civil Aviation Organization
- ICAO-TI: 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