SAFETY DATA SHEET

Revision Date: 05/23/2015
Print Date: 6/11/2015
SDS Number: R0411612

FULL SYNTHETIC SAE 0W-20 MOTOR OIL


SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Trade name: FULL SYNTHETIC SAE 0W-20 MOTOR OIL

Recommended use of the chemical and restrictions on use

Details of the supplier of the safety data sheet
Ashland
P.O. Box 2219
Columbus, OH 43216
United States of America

Emergency telephone number
1-800-ASHLAND (1-800-274-5263)

Regulatory Information Number
1-800-325-3751

Product Information
614-790-3333

SECTION 2. HAZARDS IDENTIFICATION

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

GHS Label element
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

Chemical nature: Defatter

Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEAVY PARAFFINIC DISTILLATE</td>
<td>64742-54-7</td>
<td>Asp. Tox. 1; H304</td>
<td>69.35</td>
</tr>
<tr>
<td>Benzenesulfonic acid, C10-60-</td>
<td>90194-32-4</td>
<td>Eye Irrit. 2A; H319</td>
<td>6.21</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: acne 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  

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.  

Conditions for safe storage: Electrical installations / working materials must comply with the technological safety standards.  

Materials to avoid: No materials to be especially mentioned.
SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with 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 as appropriate:
- Safety shoes
- Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures: General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: liquid

Odour: No data available

Odour Threshold: No data available

pH: No data available

Boiling point/boiling range: 626 °F / 330 °C (1,013.333333 hPa)
- Calculated Phase Transition Liquid/Gas

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)
- GLP: Calculated Explosive Limit
Lower explosion limit : 1 % (V)
GLP: Calculated Explosive Limit
Vapour pressure : 1.3333333 hPa (20 °C)
Calculated Vapor Pressure
Relative vapour density : No data available
Relative density : No data available
Density : 0.843 g/cm³
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 : 45.4 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 : Strong oxidizing agents
Hazardous decomposition products : carbon dioxide and carbon monoxide
Hydrocarbons

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:**
- **HEAVY PARAFFINIC DISTILLATE:**
  - Acute oral toxicity: LD 50 (Rat): > 15 g/kg
  - Acute dermal toxicity: LD 50 (Rabbit): > 5 g/kg

**Skin corrosion/irritation**
Not classified based on available information.

**Product:**
Result: Repeated exposure may cause skin dryness or cracking.

**Components:**
- **HEAVY PARAFFINIC DISTILLATE:**
  Result: Mildly irritating to skin

  Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts:
  Result: Not irritating to skin

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

**Product:**
Result: Slightly irritating to eyes
Remarks: Expected based on components.

Remarks: Unlikely to cause eye irritation or injury.

**Components:**
- **HEAVY PARAFFINIC DISTILLATE:**
  Result: Not irritating to eyes

  Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts:
  Result: Irritating to eyes

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

**Germ cell mutagenicity**
Not classified based on available information.

**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:
HEAVY 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

Components:
HEAVY PARAFFINIC DISTILLATE:
Toxicity to fish: LL50 (Fish): > 100 mg/l
Toxicity to daphnia and other aquatic invertebrates: EL50 (Aquatic invertebrates): > 10,000 mg/l
Toxicity to algae: EL50 (Algae, algal mat (Algae)): > 100 mg/l
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

Persistence and degradability

Components:
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: No data available

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

REGULATION

<table>
<thead>
<tr>
<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>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U.S. DOT - RAIL

<table>
<thead>
<tr>
<th>ID NUMBER</th>
<th>PROPER SHIPPING NAME</th>
<th>*HAZARD CLASS</th>
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<th>PACKING GROUP</th>
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U.S. DOT - INLAND WATERWAYS

<table>
<thead>
<tr>
<th>ID NUMBER</th>
<th>PROPER SHIPPING NAME</th>
<th>*HAZARD CLASS</th>
<th>SUBSIDIARY HAZARDS</th>
<th>PACKING GROUP</th>
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<td>Not dangerous goods</td>
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</table>

TRANSPORT CANADA - ROAD

<table>
<thead>
<tr>
<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>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TRANSPORT CANADA - RAIL
Not dangerous goods

TRANSPORT CANADA - INLAND WATERWAYS
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

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES
Not dangerous goods

*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 Component(s) SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Pennsylvania Right To Know
HEAVY PARAFFINIC DISTILLATE 64742-54-7 50.00 - 70.00 %
HYDROTREATED HEAVY PARAFFINIC BASE OIL 64742-54-7 10.00 - 20.00 %
HEAVY PARAFFINIC DISTILLATE 64742-54-7 5.00 - 10.00 %
<table>
<thead>
<tr>
<th>Component Description</th>
<th>CAS Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts</td>
<td>90194-32-4</td>
<td>5.00 - 10.00 %</td>
</tr>
<tr>
<td><strong>New Jersey Right To Know</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEAVY PARAFFINIC DISTILLATE</td>
<td>64742-54-7</td>
<td>50.00 - 70.00 %</td>
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<tr>
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<td>10.00 - 20.00 %</td>
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<tr>
<td>Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts</td>
<td>90194-32-4</td>
<td>5.00 - 10.00 %</td>
</tr>
<tr>
<td>LUBRICANT ADDITIVE</td>
<td>Not Assigned</td>
<td>1.00 - 5.00 %</td>
</tr>
</tbody>
</table>

**California Prop 65**

Proposition 65 warnings are not required for this product based on the results of a risk assessment.

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

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Component Status</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>AUSTRI</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>ENCS</td>
<td>Not in compliance with the inventory</td>
</tr>
<tr>
<td>KECL</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>PICCS</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>IECSC</td>
<td>q (quantity restricted)</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), TSCA (USA)
**SECTION 16. OTHER INFORMATION**

**Further information**
Revision Date: 05/23/2015

<table>
<thead>
<tr>
<th>NFPA:</th>
<th>Flammability</th>
<th>HMIS III:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>1</td>
<td>HEALTH 1</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>FLAMMABILITY 1</td>
</tr>
<tr>
<td>Instability</td>
<td></td>
<td>PHYSICAL HAZARD 0</td>
</tr>
</tbody>
</table>

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

**NFPA Flammable and Combustible Liquids Classification**
Combustible Liquid Class IIIB

**Full text of H-Statements referred to under sections 2 and 3.**
H304 May be fatal if swallowed and enters airways.
H319 Causes serious eye irritation.

Sources of key data used to compile the Safety Data Sheet
Ashland 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 Ashland's Environmental Health and Safety Department (1-800-325-3751).

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