1. Identification

Product identifier: MOTORCRAFT SAE 5W-40 FULL SYNTHETIC DIESEL MOTOR OIL

Other means of identification:

- FIR No.: 198811
- Recommended use: Diesel engine service fill motor oil
- Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information:

- Company Name: Ford Motor Company
- Address: Attention: MSDS Information, P.O. Box 1899, Dearborn, Michigan 48121, USA
- Telephone: 1-800-392-3673
- SDS Information: 1-800-448-2063 (USA and Canada), fordsds.com

Emergency telephone numbers:

- Poison Control Center: USA and Canada: 1-800-959-3673
- INFOTRAC (Transportation): USA and Canada 1-800-535-5053

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards: Not classified.

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements:

- Hazard symbol: None.
- Signal word: None.
- Hazard statement: The mixture does not meet the criteria for classification.
- Precautionary statement:
  - Prevention: Observe good industrial hygiene practices.
  - Response: Wash hands after handling.
  - Storage: Store away from incompatible materials.
  - Disposal: Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC):

- Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
- Direct contact with eyes may cause temporary irritation. Inhalation of vapors/fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing or difficulty breathing.

Supplemental information: None.

3. Composition/information on ingredients

Mixtures:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc Compound</td>
<td>Trade Secret</td>
<td>1.1</td>
<td></td>
</tr>
</tbody>
</table>

Specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation: Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact: Wash off with soap and water. Get medical attention if irritation develops and persists.
Rinse with water. Get medical attention if irritation develops and persists.

Rinse mouth. Get medical attention if symptoms occur.

Direct contact with eyes may cause temporary irritation.

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Do not use water jet as an extinguisher, as this will spread the fire.

During fire, gases hazardous to health may be formed. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Move containers from fire area if you can do so without risk.

Use standard firefighting procedures and consider the hazards of other involved materials.

No unusual fire or explosion hazards noted.

Avoid inhalation of vapors or mists. Avoid contact with eyes, skin, and clothing. Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

The product is immiscible with water and will spread on the water surface. Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. 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.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Observe good industrial hygiene practices. For personal protection, see section 8 of the SDS.

Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

No biological exposure limits noted for the ingredient(s).

Use adequate ventilation to control airborne concentrations below the exposure limits/guidelines. If user operations generate a vapor, dust and/or mist, use process enclosure, appropriate local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits/guidelines.

Wear safety glasses with side shields (or goggles).
Skin protection

Hand protection
Suitable chemical protective gloves should be worn when the potential exists for skin exposure. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Nitrile gloves are recommended.

Other
Wear appropriate chemical resistant clothing if applicable.

Respiratory protection
If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of OSHA Respiratory Protection Standard 29 CFR 1910.134 and/or Canadian Standard CSA Z94.4.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state
Liquid.

Form
Liquid.

Color
Amber.

Odor
Aliphatic.

Odor threshold
Not available.

pH
Not available.

Melting point/freezing point
Not available.

Initial boiling point and boiling range
Not available.

Flash point
410.0 °F (210.0 °C) Pensky-Martens Closed Cup

Evaporation rate
Not available.

Flammability (solid, gas)
Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)
Not available.

Flammability limit - upper (%)
Not available.

Explosive limit - lower (%)
Not available.

Explosive limit - upper (%)
Not available.

Vapor pressure
< 1 kPa @ 20° C

Vapor density
> 1 (AIR=1)

Relative density
0.848

Relative density temperature
60 °F (15.56 °C)

Solubility(ies)

Solubility (water)
Negligible

Partition coefficient (n-octanol/water)
Not available.

Auto-ignition temperature
Not available.

Decomposition temperature
Not available.

Viscosity
89 cSt

Viscosity temperature
104 °F (40 °C)

Other information

Bulk density
7.06 lb/gal

Pour point
-40 °F (-40 °C)

10. Stability and reactivity

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
Material is stable under normal conditions.
Hazardous polymerization does not occur.

Conditions to avoid
Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials
Strong oxidizing agents.

Hazardous decomposition products
Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

11. Toxicological information

Information on likely routes of exposure
- **Inhalation**: Inhalation of vapors/fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing or difficulty breathing. Prolonged inhalation may be harmful.
- **Skin contact**: Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
- **Eye contact**: Direct contact with eyes may cause temporary irritation.
- **Ingestion**: Expected to be a low ingestion hazard. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics
- Direct contact with eyes may cause temporary irritation.

Information on toxicological effects
- **Acute toxicity**: Not expected to be hazardous by OSHA criteria.
- **Skin corrosion/irritation**: Prolonged skin contact may cause temporary irritation.
- **Serious eye damage/eye irritation**: Direct contact with eyes may cause temporary irritation.
- **Respiratory or skin sensitization**
  - **Respiratory sensitization**: Not a respiratory sensitizer.
  - **Skin sensitization**: This product is not expected to cause skin sensitization.
- **Germ cell mutagenicity**: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
- **Carcinogenicity**: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests. Continuous long term contact with used motor oil has caused skin cancer in animal tests.
- **Reproductive toxicity**: This product is not expected to cause reproductive or developmental effects.
- **Specific target organ toxicity - single exposure**: Not classified.
- **Specific target organ toxicity - repeated exposure**: Not classified.
- **Aspiration hazard**: Not an aspiration hazard.
- **Chronic effects**: Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability
No data is available on the degradability of this product.

Bioaccumulative potential
No data available.

Mobility in soil
No data available.

Other adverse effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Don't pollute. Conserve resources. Return used oil to collection centers.

Local disposal regulations
Dispose in accordance with all applicable regulations.

Hazardous waste code
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not established.

15. Regulatory information

US federal regulations
This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
Zinc Compound (CAS Trade Secret) Listed.

SARA 304 Emergency release notification
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
No

SARA 313 (TRI reporting)
Chemical name | CAS number | % by wt.
--- | --- | ---
Zinc Compound | Trade Secret | 1.10000000000

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories
All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

16. Other information, including date of preparation or last revision

Issue date 07-14-2017
Version 01
**HMIS® ratings**

- Health: 0
- Flammability: 1
- Physical hazard: 0

**NFPA ratings**

- Health: 0
- Flammability: 1
- Instability: 0

**Preparation Information and Disclaimer**

This document was prepared by FCSD-Toxicology, Ford Motor Company, Fairlane Business Park IV, 17225 Federal Drive, Allen Park, MI 48101, USA, based in part on information provided by the manufacturer. The information on this data sheet represents our current data and is accurate to the best of our knowledge as to the proper handling of this product under normal conditions and in accordance with the application specified on the packaging and/or technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user. To the extent that there are any differences between this product's Safety Data Sheet (SDS) and the consumer packaged product labels, the SDS should be followed.

**Part number(s)**

- XO-5W40-5Q3SD, XO-5W40-DSD, XO-5W40-QSD