MATERIAL SAFETY DATA SHEET

EFFECTIVE DATE: 1-1-94
REVISION NUMBER: 6

QUAKER STATE CORPORATION • P.O. Box 989, Oil City, Pennsylvania 16301.

I. IDENTIFICATION

PRODUCT NAME: Quaker State HD Motor Oil (10W, 20W-20, 30, 40)
CHEMICAL NAME: N/A

FORMULA: Complex mixture of Petroleum Hydrocarbons plus Additives
SYNONYM: Multi-viscosity motor oil
CHEMICAL FAMILY: Petroleum Hydrocarbon

DEPARTMENT OF TRANSPORTATION: HAZARD CLASSIFICATION: Not hazardous under DOT 172.101
SHIPPING NAME: Petroleum Lubricating Oil
IDENTIFICATION #: None

CAS #: Mixture
CAS NAME: Mixture

II. TYPICAL COMPOSITION

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>CAS #</th>
<th>% wt.</th>
<th>TLV (UNITS) (SOURCE)</th>
<th>HAZARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Oils®</td>
<td>Mixture</td>
<td>90</td>
<td>5 mg/M³ TWA ACGIH</td>
<td></td>
</tr>
<tr>
<td>Additive Package*</td>
<td>Mixture</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Additive manufacturers consider their additive package to be proprietary information.
We consider our blend of mineral oils to be proprietary information.

III. PHYSICAL DATA

BOILING POINT, 760 mm. Hg: N/D
SPECIFIC GRAVITY (H₂O = 1): ? .87
VAPOR DENSITY (AIR = 1): N/D
PER CENT VOLATILES BY VOLUME: Nil
APPEARANCE AND ODOR: Dark liquid (thickness dependent on viscosity). Slight hydrocarbon odor.

PHYSICAL STATE: Liquid
VAPOUR PRESSURE AT 20°C: N/D
SOLUBILITY IN WATER, % BY WT.: Nil
EVAPORATION RATE (Butyl Acetate = 1): N/D

This information is, to the best of Quaker State Corporation’s knowledge and belief, accurate and reliable. However, no representation, warranty, or guarantee is made to its accuracy, reliability, or completeness. It is the user’s responsibility to satisfy himself as to the suitableness and completeness of such information for his own particular use.

FOR FURTHER INFORMATION CALL: (814) 676-7676
IV. HEALTH HAZARD DATA

TLV AND SOURCE: Oil Mist, Mineral - TWA 5 mg/M³ ACGIH 1983-1984

ACUTE EFFECTS OF OVEREXPOSURE

SWALLOWING: Not expected to be acutely toxic by ingestion. May cause nausea and diarrhea.

SKIN ABSORPTION: No data available.

INHALATION: Not expected to be toxic by inhalation. However, breathing mineral oil mists at levels above the TLV may cause respiratory irritation and possible discomfort. The creation of an oil mist is unlikely when used as a motor oil.

SKIN CONTACT: Material expected to cause no more than minor skin irritation following prolonged and/or repeated contact.

EYE CONTACT: May cause minor eye irritation.

CHRONIC EFFECTS OF OVEREXPOSURE

None known. See Notes to Physician below.

EMERGENCY AND FIRST AID PROCEDURES

SWALLOWING: If material is swallowed, do not induce vomiting and contact a physician.

SKIN: Wash skin thoroughly with soap and water. Launder soiled clothing.

INHALATION: Although inhalation of this material is unlikely, if respiratory discomfort or irritation occurs due to inhalation of oil mist, move person to fresh air. Contact a physician if discomfort or irritation continues.

EYES: Flush with water for 15 minutes. If irritation continues, contact a physician.

NOTES TO PHYSICIAN

Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water. It is believed during use in internal combustion engines contamination of oil with low levels of cancer causing combustion products (poly nuclear aromatics) occurs.
V. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT [test method(s)]:: 400° F, minimum (COC)  
AUTO IGNITION TEMPERATURE:: N/D

FLAMMABLE LIMITS IN AIR: % by volume: N/A

EXTINGUISHING MEDIA: CO₂, Dry Chemical, Foam, Water Fog. Water may be ineffective in fighting an oil fire unless used by experienced fire fighters.

SPECIAL FIRE FIGHTING PROCEDURES: For small fires involving this material, no special procedure or precautions are necessary. For large storage fires involving this material and/or other lubricating products, do not enter any enclosed or confined space without full protective equipment including self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Containers may burst when exposed to fire conditions.

VI. REACTIVITY DATA

STABILITY: Stable  

CONDITIONS TO AVOID: High temperatures and open flame.

INCOMPATIBILITY (materials to avoid): Strong oxidizing agents.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS: Carbon dioxide, water vapor. May produce oxides of sulphur, nitrogen and phosphorus. Incomplete combustion can produce carbon monoxide.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: None known

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:  
Clean up spills as soon as possible. Absorb large spills with commercially available absorbent materials, such as absorbent clay.

WASTE DISPOSAL METHOD:  
Place contaminated material in disposable containers and bury in an approved landfill site per local, state and federal regulations.

VIII. PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION [specify type]: Not applicable for intended use. However, if unusual operating conditions create concentrations in excess of the TLV, an approved respirator is recommended.

VENTILATION: None needed for intended use. Special ventilation is necessary only if unusual operating conditions create concentrations in excess of the TLV.

PROTECTIVE GLOVES: Impervious protective gloves can minimize skin exposures where prolonged or repeated exposures can occur.

EYE PROTECTION: Although none normally necessary for intended use, safety glasses or a face shield can reduce the possibility of accidental eye contact.

OTHER PROTECTIVE EQUIPMENT: None normally necessary for intended use.
IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Do not store near high heat or open flames.

PRECAUTIONS DURING USE: Avoid prolonged or frequently repeated skin contact with this material. Skin contact can be minimized by wearing impervious protective gloves. As with all products of this nature, good personal hygiene is essential. Hands and other exposed areas should be washed thoroughly with soap and water after contact, especially before eating and/or smoking. Regular laundering of contaminated clothing is essential to reduce indirect skin contact with this material.

X. REGULATORY INFORMATION


SARA Title III: 1.3% Zinc Reportable under Sec. 313.

N.J. Right To Know: REPORTABLE CONTENTS: Motor Oil 800967-5478 P*
N.J. Trade Secret Registry No.

NOTES

PRODUCT CODES

<table>
<thead>
<tr>
<th>SAE 10</th>
<th>SAE 20W-20</th>
<th>SAE 30</th>
<th>SAE 40</th>
<th>Package</th>
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<td>403519</td>
<td>403619</td>
<td>403719</td>
<td>Bulk</td>
</tr>
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<td>403710</td>
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<td>403508</td>
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<td>5 gal. container</td>
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<td></td>
<td></td>
<td>403607</td>
<td></td>
<td>5 qt. pl. jug</td>
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<tr>
<td>403448</td>
<td>403548</td>
<td>403648</td>
<td>403748</td>
<td>1 qt. pl. bottle</td>
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</tbody>
</table>

Approved by D. W. Cralley - Manager Safety & Health