CITGO Petroleum Corporation  
P.O. Box 300  
Tulsa, Oklahoma 74102  

MATERIAL SAFETY DATA SHEET  

| Trade Name: | CITGO Non-detergent Motor Oil  
|            | SAE 20-20W |  
| Synonyms:  | Motor Oil  
|            | Lubricating Oil |  
| CAS Reg. No.: | Mixture |  
| CITGO Index No.: | TSIS-1062,1803 |  

*CITGO Assignment based on our evaluation.

Technical Contact: (918) 561-5165  

I. GENERIC COMPOSITION/INGREDIENTS  

<table>
<thead>
<tr>
<th>Material</th>
<th>%</th>
<th>Hazard Data</th>
</tr>
</thead>
</table>
| Refined Petroleum Oil(s):  
| CAS #64742-44-5 | 0-50 | LD50 (oral-rat): >15g/kg  
| Eye: Practically Non-Irritating  
| (0.7-1.7/110, Draize)  
| Skin: Non-Irritating or Practically Non-Irritating (0-0.6/8, Draize)  
| LC50/4H (inhln-rat): >3,540mg/m³ |  
| Other Refined Petroleum Oils | 50-100 | LD50 (oral-rat) |  

II. PHYSICAL DATA  

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point, 760 mmHg, °C (°F):</td>
<td>371.1 (700)</td>
</tr>
<tr>
<td>Melting Point, °C (°F):</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Pressure, mmHg (25°C):</td>
<td>&lt;3x10⁻⁴</td>
</tr>
<tr>
<td>Specific Gravity (H₂O=1):</td>
<td>0.89/60°F</td>
</tr>
<tr>
<td>Solubility in H₂O, % By Wt.:</td>
<td>Negligible</td>
</tr>
<tr>
<td>Vapor Density (Air=1):</td>
<td>&gt;1</td>
</tr>
<tr>
<td>Evaporation Rate (Butyl Acetate=1):</td>
<td>&lt;1</td>
</tr>
<tr>
<td>% Volatiles By Vol.:</td>
<td>ND</td>
</tr>
<tr>
<td>Appearance and Odor:</td>
<td>Amber fluid – mild odor.</td>
</tr>
</tbody>
</table>

ND = No Data  
NA = Not Applicable
III. FIRE AND EXPLOSION DATA

Flash Point, °C (°F): 241 (465)  Autoignition Temperature, °C (°F): 188 (380)

Flammable Limits in Air, % by Vol:  Lower: NA  Upper: NA

Extinguishing Media:  CO₂, dry chemical, foam or water fog.

Special Fire Fighting Procedure:  None

Unusual Fire or Explosion Hazard:  Water may cause frothing.

IV. HEALTH HAZARD INFORMATION

Toxicity Summary:  Slightly toxic – 1 pt to 1 qt is approximate lethal oral dose for 150 lb human adult.

Exposure Symptoms

Inhalation:  Low risk of inhalation. In enclosed spaces or when hot, vapors may reach concentrations sufficient to cause drowsiness, dizziness, headache, nausea or lung irritation. Mists (>TLV) may cause chemical pneumonitis.

Skin Contact:  Prolonged and/or frequent contact may cause drying, cracking (dermatitis) or folliculitis.

Skin Absorption:  No probable hazard.

Eye Contact:  May be mildly irritating.

Ingestion:  Generally low toxicity. Very large amounts may cause generalized depression, headache, drowsiness, nausea, vomiting or diarrhea. Small doses may produce irritation and diarrhea.

Special Chronic Effects:  Dermatitis or folliculitis possible.

First Aid

Inhalation:  Remove to fresh air. Respiratory support if necessary. Seek medical aid.

Skin:  Wash with soap and water. Do not wear heavily contaminated clothing before laundering. (Subcutaneous injection is a medical emergency . . . Seek medical aid immediately.)

Eyes:  Flush with large volumes of water. See physician if any complications arise.

Ingestion:  Do not induce vomiting. Seek medical aid.

Notes to Physician:  SUS viscosity at 100°F = 367:  For amounts greater than 2 oz . . . careful gastric lavage with tight fitting or cuffed tube is to be preferred over emesis. If viscosity >100 SUS at 100°F, emesis may be induced for large quantities.

- Aspiration may cause chemical pneumonitis or lipid pneumonia.

ND = No Data
NA = Not Applicable
- Subcutaneous injection requires prompt surgical debridement. If not familiar with technique, seek skilled advice.

V. REACTIVITY DATA

Conditions Contributing to Instability: None

Incompatibility: Strong Oxidants

Hazardous Decomposition Products (thermal, unless otherwise specified): CO, CO₂, and trace oxides of sulfur, zinc, and phosphorus.

Conditions Contributing to Hazardous Polymerization: None

VI. SPILL OR LEAK PROCEDURES

Follow accepted industry practices and/or local, state and federal regulations. Check before handling.

VII. SPECIAL PROTECTION INFORMATION

Ventilation Requirements: TLV 5 mg/cu m as oil mist. (ACGIH 1979)

Specific Personal Protective Equipment

Respiratory: Normally none required. If high vapor or mist concentrations expected — organic respirator.
Eyes: Safety goggles if splashing is anticipated.
Gloves: Oil impervious gloves if frequent or prolonged contact is expected.
Other Clothing or Equipment: Normally, none.

VIII. SPECIAL PRECAUTIONS

Precautionary Statements: None

Storage: Store in steel tank or drum below 120°F. Do not apply high heat or flame to container. DOT hazard label not required.

The suggestions and data provided herewith are based upon tests and information which we believe to be reliable. However, we make no guarantee with respect thereto and assume no liability resulting from the use thereof. Users should make their own investigations to determine the suitability of the information or products for their particular purpose. Furthermore, nothing contained therein is intended as permission, inducement or recommendation to violate any laws or to practice any invention covered by existing patents.
Account Number:

University of Wisconsin-Whitewater
ATTN: Vay Rodman
800 West Main Street
Whitewater, WI 53190-1790

Attention: Plant Manager/Hazard Communication Coordinator

Dear Customer:

Enclosed is the Material Safety Data Sheet (MSDS) you requested. In addition to Hazard Communication requirements, the MSDS is intended to provide notification of SARA Section 313 “toxic chemicals” per 40 CFR 372. In order for the MSDS to serve its intended purpose, it should be forwarded to those persons in your organization who have a need for safety and environmental information.

If you are a distributor, OSHA and EPA regulations require that you provide a copy of the MSDS to your customers. You should consult 40 CFR 372.45 for guidance with respect to products containing toxic chemicals referenced in SARA Section 313.

If you have questions regarding CITGO’s Hazard Communication Program, please contact me at the above address.

Sincerely,

Yvonne Hale
Literature Distribution Center

Enclosure

Please note that Non-Detergent 20W-50 was removed from our product line around 1981 or 82.