CITGO Supergard® 10W-30
Motor Oil
Material Safety Data Sheet

CITGO Petroleum Corporation
P.O. Box 3758
Tulsa, OK  74102
MSDS No.  20813
Revision Date  10/28/98

IMPORTANT: Read this MSDS before handling or disposing of this product and pass this
information on to employees, customers and users of this product.

Emergency Overview

Physical State  Liquid.
Color  Amber.
Odor  Mild Petroleum Odor

CAUTION!
Can cause mild skin irritation and inflammation.
Hot oil may cause thermal burns on contact.
"Used" motor oil has been associated with skin cancer in
laboratory animals following extended contact.
This material can burn when preheated but will not ignite readily.
Spills may create a slipping hazard!

SECTION 1: IDENTIFICATION

Trade Name  CITGO Supergard® 10W-30 Motor Oil
Product Number  20813
CAS Number  Mixture
Product Family  Lubricating Oil
Synonyms  Motor Oil

Technical Contact  (918) 495-5933
Medical Emergency  (918) 495-4700
CHEMTREC Emergency  (800) 424-9300

SECTION 2: COMPOSITION

Component Name(s)  CAS Registry No.  Concentration (%)
Highly-Refined Petroleum Lubricant Oils  Mixture  82.1
Zinc C1-C14 alkylldithiophosphate  68649-42-3  0 - 1
Proprietary Additives  Mixture  8 - 12
Viscosity Index Improver  Mixture  6 - 10

SECTION 3: HAZARDS IDENTIFICATION

Also see Emergency Overview and Hazard Ratings on the top of Page 1 of this MSDS.

Major Route(s) of Entry  Skin contact.

Signs and Symptoms of Acute Exposure

Inhalation  No significant adverse health effects are expected to occur upon short-term exposure to this
product. Aspiration of liquid into the lungs can cause severe lung damage or death.

Eye Contact  This product can cause mild, transient, eye irritation with short-term contact with liquid or sprays.
CITGO Supergard® 10W-30 Motor Oil

Skin Contact: This product can cause mild, transient skin irritation with short-term exposure.

Ingestion: If swallowed, no significant adverse health effects are anticipated. Ingestion can cause a laxative effect. If aspirated into the lungs, liquid can cause severe lung damage or death.

Chronic Health Effects Summary: Prolonged or repeated contact can cause mild skin irritation and inflammation characterized by drying, cracking, (dermatitis) or oil acne.

Conditions Aggravated by Exposure: Personnel with pre-existing skin disorders should avoid repeated or prolonged contact with this product.

Target Organs: Skin.

Carcinogenic Potential: This product is not believed to contain components that are considered carcinogenic by OSHA, IARC or NTP.

OSHA Hazard Classification is indicated by an "X" in the box adjacent to the hazard title. If no "X" is present, the product does not exhibit the hazard as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).

<table>
<thead>
<tr>
<th>OSHA Health Hazard Classification</th>
<th>OSHA Physical Hazard Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irritant</td>
<td>Combustible</td>
</tr>
<tr>
<td>Sensitizer</td>
<td>Toxic</td>
</tr>
<tr>
<td>Corrosive</td>
<td>Highly Toxic</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid. For more specific information, refer to Exposure Controls and Personal Protection in Section 8 of this MSDS.

Inhalation: Vaporization is not expected at ambient temperatures. This material is not expected to cause inhalation-related disorders under anticipated conditions of use. In case of overexposure, move the person to fresh air.

Eye Contact: Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water while occasionally lifting and lowering eyelids. Seek medical attention if excessive tearing, redness, or pain persists.

Skin Contact: Remove contaminated shoes and clothing. Wipe off excess material. Wash exposed skin with soap and water. Seek medical attention if tissue appears damaged or if irritation persists. Thoroughly clean contaminated clothing before reuse. Discard contaminated leather goods.

Ingestion: Do not induce vomiting unless directed to by a physician. Do not give anything to drink unless directed to by a physician. Never give anything by mouth to a person who is not fully conscious. Seek medical attention immediately.

Notes to Physician: The viscosity range of the product(s) represented by this MSDS is 100 to 400 SUS at 100°F. Accordingly, upon ingestion there is a low to moderate risk of aspiration. Careful gastric lavage may be considered to evacuate large quantities of material. Subcutaneous or intramuscular injection requires prompt surgical debridement.

SECTION 5: FIRE FIGHTING MEASURES

NFPA Flammability Classification: OSHA/NFPA Class-IIIB combustible liquid. Slightly combustible!


Lower Flammable Limit: No data.

Auto-Ignition Temp.: Not available.

Upper Flammable Limit: No data.

MSDS No.: Not available.  Revision Date: 10/28/98  Continued on Next Page  Page Number: 2
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Hazardous Combustion Products
CO2, CO, smoke, fumes, unburned hydrocarbons and trace oxides of sulfur, nitrogen, phosphorus and zinc.

Special Properties
When heated above its flash point temperature, this material will release vapors which, if exposed to an ignition source, can ignite. In enclosed spaces vapors can ignite with explosive force. Mists or sprays may burn at temperatures below the flash point.

Extinguishing Media
Use dry chemical, foam, Carbon Dioxide or water fog.

Fire Fighting Protective Clothing
Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion/decomposition products and oxygen deficiencies.

SECTION 6: ACCIDENTAL RELEASE MEASURES
Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Slipping hazard; do not walk through spilled material. Stop leak if you can do so without risk. For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal. Contain large spills to maximize product recovery or disposal. Prevent entry into waterways or sewers. In urban area, cleanup spill as soon as possible. In natural environments, seek cleanup advice from specialists to minimize physical habitat damage. This material will float on water. Absorbent pads and similar materials can be used. Comply with all laws and regulations.

SECTION 7: HANDLING AND STORAGE
Handling
Avoid water contamination and temperatures above 150° F to minimize product degradation. Empty containers may contain product residues that can ignite with explosive force. Do not pressurize, cut, weld, braze solder, drill, grind or expose containers to flames, sparks, heat or other potential ignition sources. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

Storage
Keep container closed. Store in a cool, dry, well-ventilated area. Do not store at temperatures above 120° F or in direct sunlight. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers or waste residues of this product.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION
Engineering Controls
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits (see below). An eye wash station and safety shower should be located near the work-station.

Personal Protective Equipment
Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required.

Eye Protection
Safety glasses equipped with side shields should be adequate protection under most conditions of use. Wear goggles and/or face shield if splashing or spraying is likely, especially if material is heated above 125°F (or 51°C). Have suitable eye wash water available.
CITGO Supergard® 10W-30 Motor Oil

**Hand Protection**
No special skin protection other than good personal hygiene practice is recommended under anticipated conditions of use. However, when prolonged or extensive contact is possible, use of disposable PVC or nitrile gloves is recommended. Wash hands with plenty of mild soap and water before eating, drinking, smoking, using toilet facilities, or leaving work.

**Body Protection**
Avoid prolonged and/or repeated skin contact, especially after this product has been used in a crankcase. If splashing or spraying is expected, chemical-resistant (Tyvek®, nitrile, or neoprene) protective clothing should be worn. This might include long-sleeves, apron, slicker suit, boots, and additional facial protection. If general contact occurs, promptly remove soaked clothing and take a shower. Contaminated leather goods should be removed promptly and discarded.

**Respiratory Protection**
Vaporization or misting is not expected at ambient temperatures. Therefore, the need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).

**General Comments**
Use good personal hygiene practices. Wash hands and other exposed skin areas with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities, or leaving work. DO NOT use gasoline, kerosene, solvents, or harsh abrasive skin cleaners. Since specific exposure standards/control limits have not been established for this product, the "Oil Mist, Mineral" exposure limits shown below are suggested as minimum control guidelines.

**Occupational Exposure Guidelines**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Concentration (%)</th>
<th>Applicable Workplace Exposure Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly-Refined Petroleum</td>
<td>82.1</td>
<td>TWA: 5 STEL: 10 (mg/m³) from ACGIH (TLV)</td>
</tr>
<tr>
<td>Lubricant Oils</td>
<td></td>
<td>TWA: 5 (mg/m³) from OSHA (PEL)</td>
</tr>
<tr>
<td>Zinc C1-C14 alkylldithiophosphate</td>
<td>0 - 1</td>
<td>TWA: 5 STEL: 10 (mg/m³) from NIOSH</td>
</tr>
<tr>
<td>Proprietary Additives</td>
<td>8 - 12</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity Index Improver</td>
<td>6 - 10</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
<th>Odor</th>
<th>Specific Gravity</th>
<th>Boiling Point/Range</th>
<th>Vapor Pressure</th>
<th>Solubility in Water</th>
<th>Additional Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid.</td>
<td></td>
<td>Mild Petroleum Odor</td>
<td>0.88 (Water = 1)</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Insoluble in cold water.</td>
<td>No additional information.</td>
</tr>
<tr>
<td>pH</td>
<td></td>
<td>Vapor Density</td>
<td></td>
<td>Melting/Freezing Point</td>
<td>Viscosity (cSt @ 40°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not applicable.</td>
<td></td>
<td>&gt;1 (Air = 1)</td>
<td></td>
<td>Not available.</td>
<td>80.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SECTION 10: STABILITY AND REACTIVITY**

<table>
<thead>
<tr>
<th>Chemical Stability</th>
<th>Hazardous Polymerization</th>
<th>Hazardous polymerization not expected to occur.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Conditions to Avoid**
Keep away from extreme heat and open flame.

**Materials Incompatibility**
Strong oxidizers

**Hazardous Decomposition Products**
No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this MSDS.
SECTION 11: TOXICOLOGICAL INFORMATION

For other health-related information, refer to the Emergency Overview on Page 1 and the Hazards Identification in Section 3 of this MSDS.

**Highly-Refined Petroleum Lubricant Oils:**
- **ORAL (LD50):** Acute: >5000 mg/kg [Rat].
- **DERMAL (LD50):** Acute: >2000 mg/kg [Rabbit].

**Highly-Refined Petroleum Lubricant Oils:** Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current workplace exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested.

**Motor Oils:** Used motor oil has caused cancer in lifetime skin painting studies with laboratory animals. Avoid prolonged or repeated contact with used motor oil. Use of good hygiene practices will reduce the likelihood of potential health effects.

SECTION 12: ECOLOGICAL INFORMATION

**Ecotoxicity**
No data.

**Environmental Fate**
Ecological effects testing has not been conducted on this product. However, plants and animals may experience harmful or fatal effects when coated with petroleum-based products. Petroleum-based (mineral) lube oils will normally float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway might be enough to cause a fish kill or create an anaerobic environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Hazard characteristics and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

Conditions of use may cause this material to become a hazardous waste, as defined by Federal or State regulations. It is the responsibility of the user to determine if the material is a hazardous waste at the time of disposal. Transportation, treatment, storage and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR 260 through 40 CFR 271). State and/or local regulations may be more restrictive. Contact the RCRA/Superfund Hotline at (800) 424-9346 or your regional US EPA office for guidance concerning case specific disposal issues.

SECTION 14: TRANSPORT INFORMATION

**DOT Status**
Not a U.S. Department of Transportation regulated material.

**Proper Shipping Name**
Petroleum Lubricating Oil

**Hazard Class**
Not a DOT controlled material (United States).

**Packing Group(s)**
Not applicable.

**UN/NA ID**
Not applicable.

**Reportable Quantity**
A Reportable Quantity (RQ) has not been established for this product.
SECTION 15: REGULATORY INFORMATION

TSCA
This product and/or its components are listed on the Toxic Substance Control Act (TSCA) inventory.
TSCA 12(b) annual export notification: No products were found.
TSCA 12(b) one time export: No products were found.

SARA 302/304
SARA 302/304 emergency planning and notification: No products were found.

SARA 311/312
The Superfund Amendments and Reauthorization Act of 1989 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. **This material would be classified under the following hazard categories:**
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.

SARA 313
SARA 313 toxic chemical notification and release reporting: Zinc C1-C14 alkylidithiophosphate;

CERCLA
The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. This product or refinery stream is not known to contain chemical substances subject to this statute. However, it is recommended that you contact state and local authorities to determine if there are any other reporting requirements in the event of a spill.

CWA
This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spill which produce a visible sheen on waters of the United States, ajoining shorelines or into conduits leading into surface waters, must be reported to the National Response Center at (800) 424-8802.

California Proposition 65
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: No products were found.

New Jersey Right-to-Know Label
Additional Regulatory Remarks
No additional regulatory remarks
SECTION 16: OTHER INFORMATION

Refer to the top of Page 1 for the HMIS and NFPA Hazard Ratings for this product.

REVISION INFORMATION
Version Number 1.0
Revision Date 10/28/98
Print Date Printed on 10/29/98.

ABBREVIATIONS
AP = Approximately      EQ = Equal      GT = Greater Than    LT = Less Than    NA = Not Applicable    ND = No Data
NE = Not Established

AGIHH = American Conference of Governmental Industrial Hygienists
IARC = International Agency for Research on Cancer
NIOSH = National Institute of Occupational Safety and Health
NPCA = National Paint and Coating Manufacturers Association
NFPA = National Fire Protection Association

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***** END OF MSDS *****