Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Chevron Aviation Hydraulic Fluid A

Product Number(s): CPS247707
Company Identification
ChevronTexaco Global Lubricants
6001 Bollinger Canyon Rd.
San Ramon, CA 94583
United States of America
www.chevron-lubricants.com

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
ChevronTexaco Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
email: lubemsds@chevrontexaco.com
Product Information: (800) LUBE TEK
MSDS Requests: (800) 414-6737

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>CAS NUMBER</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates, hydrotreated light</td>
<td>64742-47-8</td>
<td>70 - 90 %weight</td>
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<tr>
<td>Distillates, hydrotreated light naphthenic</td>
<td>64742-53-6</td>
<td>10 - 20 %weight</td>
</tr>
</tbody>
</table>

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- COMBUSTIBLE LIQUID AND VAPOR
- CAUSES SKIN IRRITATION

IMMEDIATE HEALTH EFFECTS
Eye: Not expected to cause prolonged or significant eye irritation.
Skin: Contact with the skin causes irritation. Symptoms may include pain, itching, discoloration, swelling, and blistering. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.
Ingestion: Not expected to be harmful if swallowed.
Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.
Skin: Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if
any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**Ingestion:** No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

**Inhalation:** No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

**Note to Physicians:** In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

**SECTION 5 FIRE FIGHTING MEASURES**

See Section 7 for proper handling and storage. Leaks/ruptures in high pressure system using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).

**FIRE CLASSIFICATION:**

**NFPA RATINGS:** Health: 1 Flammability: 2 Reactivity: 0

**FLAMMABLE PROPERTIES:**
Flashpoint: (Pensky-Martens Closed Cup) 82 °C (180 °F) (Min)
Autoignition: No Data Available
Flammability (Explosive) Limits (% by volume in air): Lower: No Data Available Upper: No Data Available

**EXTINGUISHING MEDIA:** Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

**PROTECTION OF FIRE FIGHTERS:**
Fire Fighting Instructions: For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

**Combustion Products:** Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion. Combustion may form oxides of: Nitrogen, Sulfur.

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

**Protective Measures:** Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator.

**Spill Management:** Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

**Reporting:** Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

**SECTION 7 HANDLING AND STORAGE**

**Precautionary Measures:** Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive force. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 85F. DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling.

**General Handling Information:** Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

**Static Hazard:** Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling,
gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids’, National Fire Protection Association (NFPA 77, ‘Recommended Practice on Static Electricity’, and/or the American Petroleum Institute (API) Recommended Practice 2003, ‘Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents’.

**General Storage Information:** DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces. USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

**Container Warnings:** Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

### SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

**General Considerations:**
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

**Engineering Controls:**
Use in a well-ventilated area.

**Personal Protective Equipment**

**Eye/Face Protection:** No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

**Skin Protection:** Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

**Respiratory Protection:** No respiratory protection is normally required. If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

**Occupational Exposure Limits:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Agency</th>
<th>TWA</th>
<th>STEL</th>
<th>Ceiling</th>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates, hydrotreated light</td>
<td>ACGIH</td>
<td>200 mg/m³</td>
<td>–</td>
<td>–</td>
<td>Skin A3</td>
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<tr>
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<td>–</td>
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<td>Distillates, hydrotreated light naphthenic</td>
<td>OSHA Z-1</td>
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<td>–</td>
<td>–</td>
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</table>

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

**Color:** Red

**Physical State:** Liquid

**Odor:** Petroleum odor

**pH:** Not Applicable

**Vapor Pressure:** <0.1 mmHg @ 37.8 °C (100 °F)

**Vapor Density (Air = 1):** >4

**Boiling Point:** >207.2°C (405°F)

**Solubility:** Soluble in hydrocarbons; insoluble in water
**Freezing Point:** Not Applicable  
**Melting Point:** Not Applicable  
**Specific Gravity:** 0.88 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)  
**Density:** 0.86 kg/l - 0.9 kg/l @ 15°C (59°F)  
**Viscosity:** 13.2 cSt @ 40°C (104°F) (Min)

**SECTION 10 STABILITY AND REACTIVITY**

**Chemical Stability:** This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.  
**Incompatibility With Other Materials:** May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.  
**Hazardous Decomposition Products:** None known (None expected)  
**Hazardous Polymerization:** Hazardous polymerization will not occur.

**SECTION 11 TOXICOLOGICAL INFORMATION**

**IMMEDIATE HEALTH EFFECTS**

**Eye Irritation:** The Draize eye irritation mean score in rabbits for a 24-hour exposure was: 2.7/110.  
**Skin Irritation:** The 24-72 hour EU skin irritation scores for erythema and edema, respectively, in rabbits are: 3.5, 3.5.  
**Skin Sensitization:** No product toxicology data available.  
**Acute Dermal Toxicity:** 14 day(s) LD50: >5g/kg (rabbit).  
**Acute Oral Toxicity:** LD50: >5 g/kg (rat)  
**Acute Inhalation Toxicity:** The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

**ADDITIONAL TOXICOLOGY INFORMATION:**

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

**SECTION 12 ECOLOGICAL INFORMATION**

**ECOTOXICITY**

The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.  
**ENVIRONMENTAL FATE**

This material is not expected to be readily biodegradable.

**SECTION 13 DISPOSAL CONSIDERATIONS**

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

**SECTION 14 TRANSPORT INFORMATION**

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.  
**DOT Shipping Name:** PETROLEUM PRODUCTS, N.O.S.  
**DOT Hazard Class:** COMBUSTIBLE LIQUID  
**DOT Identification Number:** UN1268  
**DOT Packing Group:** III  
**IMO/IMDG Shipping Name:** PETROLEUM PRODUCTS, N.O.S.
IMO/IMDG Hazard Class: 3 (Flammable liquid)
IMO/IMDG Identification Number: UN1268
IMO/IMDG Packing Group: III

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:
1. Immediate (Acute) Health Effects: YES
2. Delayed (Chronic) Health Effects: NO
3. Fire Hazard: YES
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:
01-1=IARC Group 1 03=EPCRA 313
01-2A=IARC Group 2A 04=CA Proposition 65
01-2B=IARC Group 2B 05=MA RTK
02=NTP Carcinogen 06=NJ RTK
08=PA RTK

No components of this material were found on the regulatory lists above.

CHEMICAL INVENTORIES:
AUSTRALIA: All the components of this material are listed on the Australian Inventory of Chemical Substances (AICS).
CANADA: All the components of this material are on the Canadian Domestic Substances List (DSL).
EUROPEAN UNION: All the components of this material are in compliance with the EU Seventh Amendment Directive 92/32/EEC.
KOREA: All the components of this product are on the Existing Chemicals List (ECL) in Korea.
PHILIPPINES: All the components of this product are listed on the Philippine Inventory of Chemicals and Chemical Substances (PICCS).
UNITED STATES: All of the components of this material are on the Toxic Substances Control Act (TSCA) Chemical Inventory.

NEW JERSEY RTK CLASSIFICATION:
Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Hydraulic oil)

WHMIS CLASSIFICATION:
Class B, Division 3: Combustible Liquids
Class D, Division 2, Subdivision B: Toxic Material - Skin or Eye Irritation

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 1 Flammability: 2 Reactivity: 0

HMIS RATINGS: Health: 2 Flammability: 2 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme. PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet: 1-16

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
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<tr>
<td>CAS</td>
<td>Chemical Abstract Service Number</td>
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<tr>
<td>ACGIH</td>
<td>American Conference of Government Industrial Hygienists</td>
</tr>
<tr>
<td>IMO/IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>API</td>
<td>American Petroleum Institute</td>
</tr>
<tr>
<td>MSDS</td>
<td>Material Safety Data Sheet</td>
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</tbody>
</table>
The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.