



# MATERIAL SAFETY DATA SHEET

## Phillips 66 Philube HG Fluid

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Phillips 66 Philube HG Fluid  
**Product Code:** 1045670  
**Intended Use:** Transmission Oil  
**Chemical Family:** Petroleum Hydrocarbon

**Responsible Party:** Phillips 66 Lubricants  
A Division of ConocoPhillips  
600 N. Dairy Ashford  
Houston, Texas  
77079-1175

**Customer Service:** 800-822-6457  
**Technical Information:** 800-766-0050

The intended use of this product is indicated above. If any additional use is known, please contact us at the Technical Information number listed.

### EMERGENCY OVERVIEW

#### 24 Hour Emergency Telephone Numbers:

Spill, Leak, Fire or Accident Call CHEMTREC:

North America: (800) 424-9300

Others: (703) 527-3887 (collect)

California Poison Control System: (800) 356-3219

### NOT CLASSIFIED AS HAZARDOUS ACCORDING TO CRITERIA OF NOHSC

**Health Hazards/Precautionary Measures:** Avoid contact with skin and clothing. Wash thoroughly after handling.

**Physical Hazards/Precautionary Measures:** Keep away from all sources of ignition.

**Appearance:** Amber  
**Physical Form:** Liquid  
**Odor:** Characteristic petroleum

#### NFPA 704 Hazard Class:

**Health:** 1 (Slight)  
**Flammability:** 1 (Slight)  
**Instability:** 0 (Least)

#### HMIS Hazard Class:

**Health:** 1 (Slight)  
**Flammability:** 1 (Slight)  
**Physical Hazards:** 0 (Least)

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS					
Component / CAS No:	Percent (%)	ACGIH:	OSHA:	NIOSH:	Other:
Zinc Compound(s) PROPRIETARY	1.0-2.0	NE	NE	NE	NE

NON-HAZARDOUS COMPONENTS					
Component / CAS No:	Percent (%)	ACGIH:	OSHA:	NIOSH:	Other:
Additives PROPRIETARY	13-15	NE	NE	NE	NE
Lubricant Base Oil (Petroleum) VARIOUS	85-87	5mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup> STEL	5 mg/m <sup>3</sup> TWA	2500 mg/m <sup>3</sup> IDLH	as Oil Mist, if Generated  5 mg/m <sup>3</sup> NOHSC TWA

All components are listed on the TSCA inventory.

The base oil for this product can be a mixture of any of the following highly refined petroleum streams: CAS 64741-88-4; CAS 64741-89-5; CAS 64741-96-4; CAS 64741-97-5; CAS 64742-01-4; CAS 64742-52-5; CAS 64742-53-6; CAS 64742-54-7; CAS 64742-55-8; CAS 64742-56-9; CAS 64742-57-0; CAS 64742-62-7; CAS 64742-63-8; CAS 64742-65-0; CAS 72623-83-7; CAS 72623-85-9; CAS 72623-86-0; CAS 72623-87-1

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

1%=10,000 PPM.

NE=Not Established

## 3. HAZARDS IDENTIFICATION

### Potential Health Effects:

**Eye:** Contact may cause mild eye irritation including stinging, watering, and redness.

**Skin:** Contact may cause mild skin irritation including redness, and a burning sensation. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin leading to dermatitis (inflammation). No harmful effects from skin absorption are expected.

**Inhalation (Breathing):** No information available. Studies by other exposure routes suggest a low degree of toxicity by inhalation.

**Ingestion (Swallowing):** No harmful effects expected from ingestion.

**Signs and Symptoms:** Effects of overexposure may include irritation of the nose and throat, irritation of the digestive tract, nausea, diarrhea.

**Cancer:** Inadequate evidence available to evaluate the cancer hazard of this material. See Section 11 for carcinogenicity information of individual components, if any.

**Target Organs:** No data available for this material.

**Developmental:** No data available for this material.

**Pre-Existing Medical Conditions:** Conditions aggravated by exposure may include skin disorders.

## 4. FIRST AID MEASURES

**Eye:** If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

**Skin:** Wipe material from skin and remove contaminated shoes and clothing. Cleanse affected area(s) thoroughly by washing with mild soap and water and, if necessary, a waterless skin cleanser. If irritation or redness develops and persists, seek medical attention.

**Inhalation (Breathing):** If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

**Ingestion (Swallowing):** First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

**Notes to Physician:** High-pressure hydrocarbon injection injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. Often these injuries require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury.

Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

## 5. FIRE-FIGHTING MEASURES

### Flammable Properties:

<b>Flash Point:</b>	356°F / 180°C (COC, Minimum)
<b>OSHA Flammability Class:</b>	Not regulated
<b>LEL%:</b>	No data
<b>UEL%:</b>	No data
<b>Autoignition Temperature:</b>	No data

**Unusual Fire & Explosion Hazards:** This material may burn, but will not ignite readily. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

**Extinguishing Media:** Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

**Fire Fighting Instructions:** For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk.

Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

## 6. ACCIDENTAL RELEASE MEASURES

This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release.

Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Spilled material may be absorbed into an appropriate absorbent material.

Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).

## 7. HANDLING AND STORAGE

**Handling:** Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8).

Do not wear contaminated clothing or shoes. Use good personal hygiene practices.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

**Storage:** Keep container(s) tightly closed. Store only in approved containers. Use and store this material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Storage temperatures above 113°F may lead to thermal decomposition, resulting in the generation of hydrogen sulfide and other sulfur containing gases. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additional engineering controls may be required.

### Personal Protective Equipment (PPE):

**Respiratory:** A NIOSH certified air purifying respirator with a Type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2).

Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a NIOSH approved self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode if there is potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

**Skin:** The use of gloves impervious to the specific material handled is advised to prevent skin contact and possible irritation (see manufacturers literature for information on permeability).

**Eye/Face:** Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

**Other Protective Equipment:** A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

Suggestions for the use of specific protective materials are based on readily available published data. Users should check with specific manufacturers to confirm the performance of their products.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Note:** Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

**Appearance:**

Amber

<b>Physical Form:</b>	Liquid
<b>Odor:</b>	Characteristic petroleum
<b>Odor Threshold:</b>	No data
<b>pH:</b>	Not applicable
<b>Vapor Pressure (mm Hg):</b>	<1
<b>Vapor Density (air=1):</b>	>1
<b>Boiling Point:</b>	No data
<b>Solubility in Water:</b>	Negligible
<b>Specific Gravity:</b>	0.86-0.88
<b>Bulk Density:</b>	7.16-7.33
<b>Bulk Density Units</b>	lbs/gal
<b>Viscosity cSt @ 100°C:</b>	8.8-9.9
<b>Viscosity cSt @ 40°C:</b>	55-64
<b>Percent Volatile:</b>	Negligible
<b>Evaporation Rate (nBuAc=1):</b>	<1
<b>Flash Point:</b>	356°F / 180°C
<b>Test Method:</b>	(COC, Minimum)
<b>LEL%:</b>	No data
<b>UEL%:</b>	No data
<b>Autoignition Temperature:</b>	No data

## 10. STABILITY AND REACTIVITY

**Stability:** Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Conditions to Avoid:** Extended exposure to high temperatures can cause decomposition.

**Materials to Avoid (Incompatible Materials):** Avoid contact with strong oxidizing agents.

**Hazardous Decomposition Products:** Combustion can yield carbon, nitrogen, sulfur, phosphorus, and zinc oxides. Hydrogen sulfide and alkyl mercaptans may also be released. Thermal decomposition may produce hydrogen sulfide and other sulfur-containing gases at temperatures greater than 113°F. Methacrylate monomers may also be formed.

**Hazardous Polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

### Chronic Data:

#### **Lubricant Base Oil (Petroleum) - CAS: VARIOUS**

*Carcinogenicity:* The petroleum base oils contained in this product have been highly refined by a variety of processes including solvent extraction, hydrotreating, and dewaxing to remove aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and therefore none are listed as a carcinogen by NTP, IARC, or OSHA.

### Acute Data:

#### **Zinc Compound(s) - CAS: PROPRIETARY**

*Dermal LD50* = No information available

*LC50* = No information available

*Oral LD50* = No information available

#### **Additives - CAS: PROPRIETARY**

*Dermal LD50* = No information available

*LC50* = No information available

*Oral LD50* = No information available

#### **Lubricant Base Oil (Petroleum) - CAS: VARIOUS**

*Dermal LD50* = >2 g/kg

*LC50* = No information available

*Oral LD50* = >5 g/kg

## 12. ECOLOGICAL INFORMATION

Not evaluated at this time.

## 13. DISPOSAL CONSIDERATIONS

This material under most intended uses would become used oil due to contamination by physical or chemical impurities. RECYCLE ALL USED OIL. While being recycled, used oil is regulated by 40 CFR 279. Use resulting in chemical or physical change or contamination may also subject it to regulation as hazardous waste. Under federal regulations, used oil is a solid waste managed under 40 CFR 279. However, in California, used oil is managed as hazardous waste until tested to show it is not hazardous. Consult state and local regulations regarding the proper handling of used oil. In the case of used oil, the intent to discard it may cause the used oil to be regulated as hazardous waste.

Contents should be completely used and containers emptied prior to discard. Rinsate may be considered a RCRA hazardous waste and must be disposed of with care and in compliance with federal, state and local regulations. Large empty containers, such as drums, should be returned to the distributor or a drum reconditioner. To assure proper disposal of small empty containers, consult with state and local regulations and disposal authorities.

## 14. TRANSPORTATION INFORMATION

**DOT Proper Shipping Name:** Not classified as hazardous

**Note:** Material is unregulated unless in container of 3500 gallons or more, then provisions of 49 CFR Part 130 apply for land shipment.

**IMDG Shipping Description:** Not regulated

**ICAO/IATA Shipping Description:** Not regulated

## 15. REGULATORY INFORMATION

### U.S. Regulations:

#### EPA SARA 311/312 (Title III Hazard Categories)

<b>Acute Health:</b>	No
<b>Chronic Health:</b>	No
<b>Fire Hazard:</b>	No
<b>Pressure Hazard:</b>	No
<b>Reactive Hazard:</b>	No

#### SARA - Section 313 and 40 CFR 372:

This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372:

Zinc Compound(s).....PROPRIETARY.....1.0-2.0%

#### EPA (CERCLA) Reportable Quantity (in pounds):

--None Known--

#### CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):

This material contains the following chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372:

-- None Known --

#### California Proposition 65:

Warning: This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

-- None Known --

#### Carcinogen Identification:

This material has not been identified as a carcinogen by NTP, IARC, or OSHA. See Section 11 for carcinogenicity information of individual components, if any.

**TSCA:**

All components are listed on the TSCA inventory.

**International Regulations:****Canadian Regulations:**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**Domestic Substances List:** Listed

**WHMIS Classification:** Not regulated

**Australian Regulations:**

References:

Regulations Specifically Applicable to the Chemical Product:

Commonwealth of Australia: Respirators must follow A51715/1716 standard for approved respirators.

New Zealand: Respirators must follow NZS 1715/1716 standard for approved respirators.

International (all countries): In the absence of local approved authorities, follow U.S. NIOSH/MSHA, U.K. BSI, Australian AS1715/1716, or new Zealand NZS 1715/1716 standards.

Australia Poison Schedule: Not applicable.

NZ Dangerous Goods Class: Not applicable.

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**Contact Point:**

ConocoPhillips Lubricants Australia Pty. Ltd.

Emergency Telephone: 1-800-226626

Office Manager

Office Hours 8 a.m.-5 p.m. Monday-Friday (excluding holidays)

Tel: +61 (0) 7 5452.9900

Fax: +61 (0) 7 5452.9999

Website: www.aplubes.conocophillips.com

## 16. OTHER INFORMATION

<b>Issue Date:</b>	05-Oct-2004
<b>Previous Issue Date:</b>	10/24/2001
<b>Product Code:</b>	1045670
<b>Reason for revision:</b>	Composition information modified - SEE SECTION 2 Changes to Physical Properties. SEE SECTION 9.
<b>Previous Product Code:</b>	P531300000
<b>MSDS Code:</b>	003471

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