

## Safety Data Sheet Natural 3HGF Food Grade Hydraulic Oil

### Section 1: Product and Company Identification

**PRODUCT NAME:** Food Machinery Oil 32/46/68/100  
**SDS NUMBER:** 778726

**SYNONYMS/OTHER MEANS OF IDENTIFICATION:** Food Machinery Oil 32  
Food Machinery Oil 46  
Food Machinery Oil 68  
Food Machinery Oil 100

**INTENDED USE:** Food Grade Machinery Lubricant

**MANUFACTURER:** Phillips 66 Lubricants  
P.O. Box 4428  
Houston, TX 77210

**EMERGENCY HEALTH AND SAFETY NUMBER:** Chemtrec: 800-424-9300 (24 Hours)

**CUSTOMER SERVICE:** U.S.: 1-800-822-6457 or International: +1-83-2486-3363

**TECHNICAL INFORMATION:** 1-877-445-9198

**SDS INFORMATION:** www.Phillips66.com  
800-762-0942  
SDS@P66.com

### Section 2: Hazard(s) Identification

This material is not considered hazardous according to OSHA criteria.



### Section 3: Composition / Information on Ingredients

Component	CASRN	Concentration <sup>1</sup>
White Mineral Oil	8042-47-5	>99
Additives	Proprietary	<1

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### Section 4: First Aid Measures

**EYE CONTACT:** If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

**SKIN CONTACT:** First aid is not normally required. However, it is good practice to wash any chemical from the skin.

**INHALATION (BREATHING):** First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. Seek immediate medical attention.

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

**NOTES TO PHYSICIAN:** 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.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** None Known

## Section 5: Fire-Fighting Measures

### NFPA 704 HAZARD CLASS

**Health:** 0    **Flammability:** 1    **Instability:** 0    (0-Minimal, 1-Slight, 2-Moderate, 3-Serious, 4-Severe)

**UNUSUAL FIRE & EXPLOSION HAZARDS:** This material may burn, but will not ignite readily. 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 / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

**FIRE FIGHTING INSTRUCTIONS:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, 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 and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. 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 safely. Avoid spreading burning liquid with water used for cooling purposes.

**HAZARDOUS COMBUSTION PRODUCTS:** Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

## Section 6: Accidental Release Measures

**PERSONAL PRECAUTIONS:** 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. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

**ENVIRONMENTAL PRECAUTIONS:** Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

**METHODS FOR CONTAINMENT AND CLEAN-UP:** Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken. See Section 13 for information on appropriate disposal.

## Section 7: Handling and Storage

**Precautions for safe handling:** Keep away from flames and hot surfaces. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8).

Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes. Spills will produce extremely slippery surfaces.

**CONDITIONS FOR SAFE STORAGE:** Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

"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. 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.

## Section 8: Exposure Controls / Personal Protection

Component	ACGIH	OSHA	Other
White Mineral Oil	TWA: 5mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> as Oil Mist, if Generated	TWA: 5mg/m <sup>3</sup> as Oil Mist, if Generated	---

**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.

**ENGINEERING CONTROLS:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

**EYE/FACE PROTECTION:** The use of eye/face protection is not normally required; however, good industrial hygiene practice suggests the use of eye protection that meets or exceeds ANSI Z.87.1 whenever working with chemicals.

**SKIN/HAND PROTECTION:** The use of skin protection is not normally required; however, good industrial hygiene practice suggests the use of gloves or other appropriate skin protection whenever working with chemicals. Suggested protective materials: Nitrile

**RESPIRATORY PROTECTION:** Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with R or P95 filters may be used.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

**Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.**

## Section 9: Physical and Chemical Properties

**NOTE:** Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

<b>APPEARANCE:</b>	Clear and bright
<b>PHYSICAL FORM:</b>	Liquid
<b>ODOR:</b>	Petroleum
<b>ODOR THRESHOLD:</b>	No data
<b>pH:</b>	Not applicable
<b>VAPOR PRESSURE:</b>	<1 mm Hg
<b>VAPOR DENSITY (AIR=1):</b>	>1
<b>INITIAL BOILING POINT/RANGE:</b>	No data <b>Melting/Freezing</b>
<b>POINT:</b>	< 15.8 °F / < -9 °C <b>Pour</b>
<b>POINT:</b>	< 15.8 °F / < -9.000 °C
<b>SOLUBILITY IN WATER:</b>	Insoluble
<b>PARTITION COEFFICIENT (N-OCTANOL/WATER) (KOW):</b>	No data
<b>SPECIFIC GRAVITY (WATER=1):</b>	0.86 - 0.88 @ 60°F (15.6°C)

<b>BULK DENSITY:</b>	7.2 - 7.3 lbs/gal
<b>VISCOSITY:</b>	5-12 cSt @ 100°C; 32-100 cSt @ 40°C
<b>PERCENT VOLATILE:</b>	Negligible
<b>EVAPORATION RATE (NBUAC=1):</b>	No data
<b>FLASH POINT:</b>	> 302 °F / > 150 °C
<b>TEST METHOD:</b>	Pensky-Martens Closed Cup (PMCC), ASTM D93, EPA 1010
<b>LOWER EXPLOSIVE LIMITS (VOL % IN AIR):</b>	No data
<b>UPPER EXPLOSIVE LIMITS (VOL % IN AIR):</b>	No data
<b>AUTO-IGNITION TEMPERATURE:</b>	No data

Section 10: Stability and Reactivity

**STABILITY:** Stable under normal ambient and anticipated conditions of use.

**CONDITIONS TO AVOID:** Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.

**MATERIALS TO AVOID (INCOMPATIBLE MATERIALS):** Avoid contact with strong oxidizing agents and strong reducing agents.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Not anticipated under normal conditions of use.

**HAZARDOUS POLYMERIZATION:** Not known to occur.

Section 11: Toxicological Information

INFORMATION ON TOXICOLOGICAL EFFECTS OF SUBSTANCE/MIXTURE

Acute Toxicity	Hazard	Additional Information	LC50/LD50 Data
Inhalation	Unlikely to be harmful		>5 mg/L (mist, estimated)
Dermal	Unlikely to be harmful		> 2 g/kg (estimated)
Oral	Unlikely to be harmful		> 5 g/kg (estimated)

**Aspiration Hazard:** Not expected to be an aspiration hazard.

**Skin Corrosion/Irritation:** Not known to be irritating.

**Serious Eye Damage/Irritation:** Not known to be irritating.

**Symptoms of Overexposure:** Effects of overexposure may include Inhalation of oil mists or vapors generated at elevated temperatures may cause respiratory irritation. Accidental ingestion can result in minor irritation of the digestive tract, nausea and diarrhea.

**Skin Sensitization:** No information available on the mixture, however none of the components have been classified for skin sensitization (or are below the concentration threshold for classification).

**Respiratory Sensitization:** No information available.

**Specific Target Organ Toxicity (Single Exposure):** Not expected to cause organ effects from single exposure.

**Specific Target Organ Toxicity (Repeated Exposure):** Not expected to cause organ effects from repeated exposure.

**Carcinogenicity:** No information available on the mixture, however none of the components have been classified for carcinogenicity (or are below the concentration threshold for classification).

**Germ Cell Mutagenicity:** No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

**Reproductive Toxicity:** No information available on the mixture, however none of the components have been classified for reproductive toxicity (or are below the concentration threshold for classification).

Information on Toxicological Effects of Components

#### White Mineral Oil

**Carcinogenicity:** The petroleum base oils contained in this product have been highly refined by a variety of processes including severe hydrocracking/hydroprocessing to reduce aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and are not considered carcinogens by NTP, IARC, or OSHA.

## Section 12: Ecological Information

**TOXICITY:** Acute aquatic toxicity studies on samples of lubricating base oils show acute toxicity values greater than 1000 mg/L. These tests were carried out on the water accommodated fraction. Results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon composition. Classification: No classified hazards.

**PERSISTENCE AND DEGRADABILITY:** Highly refined base oils are complex combinations of individual hydrocarbon species. Based on the known or expected properties of individual constituents, category members are not predicted to be readily biodegradable. Some hydrocarbon constituents of highly refined base oil are predicted to meet the criteria for persistence; on the other hand some components can be easily degraded by microorganisms under aerobic conditions.

**BIOACCUMULATIVE POTENTIAL:** Log Kow values measured for the hydrocarbon components of this material range from 4 to over 6, and therefore would be regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

**MOBILITY IN SOIL:** Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, these base oils will float and spread over the surface at a rate dependent upon viscosity. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant physical process. The main fate process is expected to be slow biodegradation of the hydrocarbon constituents in soil and sediment.

**OTHER ADVERSE EFFECTS:** None anticipated.

## Section 13: Disposal Considerations

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations.

This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the MSDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste.

This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle used oil in accordance with applicable federal and state or local regulations. Container contents should be completely used and containers should be emptied prior to discard.

## Section 14: Transport Information

### U.S. Department of Transportation (DOT)

**Shipping Description:** *Not regulated*

**Note:** *If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)*

### International Maritime Dangerous Goods (IMDG)

**Shipping Description:** *Not regulated*

**Note:** *U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25.*

### International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)

**UN/ID #:** *Not regulated*

**Note:** *U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 24.*

	LTD. QTY	Passenger Aircraft	Cargo Aircraft Only
Packaging Instruction #:	---	---	---
Max. Net Qty. Per Package:	---	---	---

## Section 15: Regulatory Information

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

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

### **CERCLA/SARA - Section 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

### **CERCLA/SARA - Section 313 and 40 CFR 372:**

This material does not contain any chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372.

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

This material does not contain any chemicals with CERCLA Reportable Quantities.

### **California Proposition 65:**

This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

### **International Hazard Classification**

#### **GHS Classification**

None

#### **Canada:**

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 Regulations.

#### **WHMIS Hazard Class:**

None

### **National Chemical Inventories**

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA

All components are either on the DSL, or are exempt from DSL listing requirements

**U.S. Export Control Classification Number:** EAR99

## Section 16: Other Information

<b>DATE OF ISSUE:</b>	15-Oct-2012
<b>STATUS:</b>	<b>FINAL</b>
<b>PREVIOUS ISSUE DATE:</b>	16-Mar-2012
<b>REVISED SECTIONS OR BASIS FOR REVISION:</b>	Manufacturer (Section 1)
<b>SDS NUMBER:</b>	778726

### **GUIDE TO ABBREVIATIONS:**

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

**DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES:**

The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data

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