Material Safety Data Sheet

308166
Rev. D
Updated: 5/02

INSTRUCTIONS
This Data Sheet contains important information.
READ AND KEEP FOR REFERENCE.

First choice when quality counts.

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 Clear to light amber. **Odor** Mild petroleum odor

WARNING!
Oil injected into the skin from high-pressure leaks in hydraulic systems can cause severe injury.
Most damage occurs during the first few hours.
Seek medical attention immediately.
Surgical removal of oil may be necessary.
Spills may create a slipping hazard.

Hazard Rankings

	HMIS	NFPA
Health Hazard	1	0
Fire Hazard	1	1
Reactivity	0	0

* = Chronic Health Hazard

Protective Equipment

Minimum Requirements
See Section 8 for Details

1.0 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Hydraulic Fluid
Chemical Name: Industrial Oils

Graco Inc.
P.O. Box 1441
60 11th Ave. NE
Minneapolis, MN 55440–1441

Part Number(s): 218-797

Use: Hydraulic Fluid used in PT2500 electric driver hydraulic pump.

Emergency Information
Health Emergency (RMPC): (303)– 623–5716

Chemical Spills (Chemtrec): (800)– 424–9300

2.0 COMPOSITION / INFORMATION ON INGREDIENTS

Component %	CAS#	% by Weight
1)Distillates, petroleum, solvent-refined light paraffinic	64741-89-5	30 – 50
2)Distillates, petroleum, solvent-refined heavy paraffinic	64741-89-5	40 – 60
3) Proprietary Ingredients	Proprietary Mixture	0 – 2
4) Zinc alkyldithiophosphate	68649-42-3	0 - 1

For exposure data, see **8.0, Exposure Controls / Personal Protection.**

3.0 HAZARDS IDENTIFICATION

Emergency Overview: **Physical State:** Liquid **Odor:** Mild petroleum odor **Color:** Clear to light amber

Potential Health Effects:

Eye Contact	This product can cause transient mild eye irritation with short-term contact with liquid sprays or mists
Skin Contact	This material can cause mild skin irritation from prolonged or repeated skin contact. Injection under the skin can cause inflammation, swelling and mild central nervous system depression. Injection of pressurized hydrocarbons can cause severe, permanent tissue damage. Initial symptoms may be minor. Injection of petroleum hydrocarbons requires immediate medical attention.
Inhalation	At elevated temperatures or in enclosed spaces, product mist or vapors may irritate the mucous membranes of the nose, the throat, bronchi, and lungs
Ingestion	If swallowed, large volumes of material can cause generalized depression, headache, drowsiness, nausea, vomiting and diarrhea. Smaller doses can cause a laxative effect. If aspirated into the lungs, liquid can cause lung damage.
Chronic Health Effects Summary	Contains a petroleum-based mineral oil. Prolonged or repeated skin contact can cause mild irritation and inflammation characterized by drying, cracking, (dermatitis) or oil acne. Repeated or prolonged inhalation of petroleum-based mineral oil mists at concentrations above applicable workplace exposure levels can cause respiratory irritation or other pulmonary effects.
Conditions Aggravated by Exposure	Medical conditions aggravated by exposure to this material may include pre-existing skin disorders.
Target Organs	This material may cause damage to the following organs: skin.
Carcinogenic Potential	This product does not contain any components at concentrations above 0.1% which 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).

OSHA Health Hazard Classification						**OSHA Physical Hazard Classification**					
Irritant	☐	**Toxic**	☐	**Combustible**	☐	**Explosive**	☐	**Pyrophoric**	☐		
Sensitizer	☐	**Highly Toxic**	☐	**Flammable**	☐	**Oxidizer**	☐	**Water-reactive**	☐		
Corrosive	☐	**Carcinogenic**	☐	**Compressed Gas**	☐	**Organic Peroxide**	☐	**Unstable**	☐		

4.0 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.

Eye	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	Remove contaminated shoes and clothing. Wipe off excess material. Wash exposed skin with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists. Thoroughly clean contaminated clothing before reuse. Discard contaminated leather goods. If material is injected under the skin, seek medical attention immediately.
Inhalation	Move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately. Keep the affected individual warm and at rest.
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	In the event of injection in underlying tissue, immediate treatment should include extensive incision, debridement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal.

. **NOTES:** NA = Not Applicable; NE = Not Established; UN = Unavailable

5.0 FIREFIGHTING MEASURES

Flashpoint	OPEN CUP: 212°C (414°F) (Cleveland.).
UFL	No Data
LFL	No Data
Autoignition Temperature	Not Available
Flammability Classification	NFPA Class-IIIB combustible material. Slightly combustible!
Extinguishing Media	Use dry chemical, foam, Carbon Dioxide or water fog
Special Properties	This material can burn but will not readily ignite. This material will release vapors when heated above the flash point temperature that can ignite when exposed to a source of ignition. In enclosed spaces, heated vapor can ignite with explosive force. Mists or sprays may burn at temperatures below the flash point.
Firefighting Equipment	Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.
Hazardous Combustion Products	Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and trace oxides of sulfur, phosphorus, zinc and/or nitrogen.

6.0 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.

7.0 HANDLING AND STORAGE

Handling	Avoid water contamination and extreme temperatures 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. Do not store with strong oxidizing agents. Do not store at temperatures above 120° F or in direct sunlight for extended periods of time. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers or waste residues of this product.

8.0 EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye	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 anticipated. Wear goggles and face shield if material is heated above 125°F (51°C). Have suitable eye wash water available
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. 
Hand Protection	Use gloves constructed of chemical resistant materials such as neoprene or heavy nitrile rubber if frequent or prolonged contact is expected. Use heat-protective gloves when handling product at elevated temperatures.
Body Protection	Use clean and impervious protective clothing (e.g., neoprene or Tyvek ®) if splashing or spraying conditions are present. Protective clothing may include long-sleeve outer garment, apron, or lab coat. If significant contact occurs, remove oil-contaminated clothing as soon as possible and promptly shower. Launder contaminated before reuse or discard. Wear heat protective boots and protective clothing when handling material at elevated temperatures
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
Respiratory Protection	Vaporization 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 abrasives as 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	**Substance** 1) Oil Mist, Mineral **Applicable Workplace Exposure Levels** **ACGIH (United States).** TWA: 5 mg/m ^{3} STEL: 10 mg/m ^{3} **OSHA (United States).** TWA: 5 mg/m ^{3}

9.0 CHEMICAL AND PHYSICAL PROPERTIES

Appearance and Odor	Mild petroleum odor
pH	Not Applicable
Vapor Pressure (mm Hg)	<0.001 kPa (<0.01 mmHg) (at 20°C)
Vapor Density (Air = 1)	>1 (Air = 1)
Boiling Point	Not available
Melting Point	Not available
Solubility in Water	Insoluble in cold water.
Specific Gravity (Water = 1)	0.87 (Water = 1)
Physical State	Liquid
Color	Clear to light amber
Viscosity (cST @ 40°C)	33
Volatile Characteristics	Negligible volatility
Additional Properties	Gravity, °API (ASTM D287) = 31.3 @ 60° F Density = 7.42 Lbs/gal. Viscosity (ASTM D2161) = 170 SUS @ 100° F

10.0 STABILITY AND REACTIVITY

Stability	Stable.
Conditions to Avoid	Keep away from extreme heat, sparks, open flame, and strongly oxidizing conditions.
Materials to Avoid	Strong oxidizers.
Hazardous Decomposition	No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this MSDS
Hazardous Polymerization	Not expected to occur

11.0 TOXILOGICAL INFORMATION

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

Distillates, petroleum, solvent-refined light paraffinic:
ORAL (LD50): Acute: >5000 mg/kg [Rat].
DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].
Distillates, petroleum, solvent-refined heavy paraffinic:
ORAL (LD50): Acute: >5000 mg/kg [Rat].
DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

Distillates, petroleum, solvent-refined light paraffinic:
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 work place 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.

Distillates, petroleum, solvent-refined heavy paraffinic:
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 work place 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.

Hydraulic Oils:
Repeated or prolonged skin contact with certain hydraulic oils can cause mild skin irritation characterized by drying, cracking (dermatitis) or oil acne. Injection under the skin, in muscle or into the blood stream can cause irritation, inflammation, swelling, fever, and systemic effects, including mild central nervous system depression. Injection of pressurized hydrocarbons can cause severe, permanent tissue damage.

12.0 ECOLOGICAL INFORMATION

Ecotoxicity
Analysis for ecological effects has not been conducted on this product. However, if spilled, this product and any contaminated soil or water may be harmful to human, animal, and aquatic life. Also, the coating action associated with petroleum and petroleum products can be harmful or fatal to aquatic life and waterfowl.

Environmental Fate
An environmental fate analysis has not been conducted on this specific product. 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 can result in a loss of marine life or create an anaerobic environment. This material contains phosphorus which is a controlled element for disposal in effluent waters in most sections of North America. Phosphorus is known to enhance the formation of algae. Severe algae growth can reduce oxygen content in the water possibly below levels necessary to support marine life.

13.0 DISPOSAL INFORMATION

Hazard characteristic 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. Empty drums and pails retain residue. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose this product's empty container to heat, flame, or other ignition sources. DO NOT attempt to clean it. Empty drums and pails should be drained completely, properly bunged or sealed, and promptly sent to a reconditioner.

14.0 TRANSPORTATION INFORMATION

U.S. Dept. of Transportation: Not a US Department of Transportation regulated material.

Hazard Class - Not regulated
Packing Group(s) – Not applicable
UN/NA ID – Not regulated
Reportable Quantity – A Reportable Quantity (RQ) has not been established for this material.
Placards

Emergency Response Guide No. Not applicable
Hazmat STCC No. – Not assigned
MARPOL III Status – Not a DOT "Marine Pollutant' Per 49 CFR 171.8

15.0 REGULATORY INFORMATION

CERCLA Sections 102A/103 Hazardous Substances (40 CFR Part 302.4)	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. Chemical substances present in this product or refinery stream that may be subject to this statute are: Zinc and Zinc Compounds, Concentration: 0 - 1%
SARA Title III Section 302 Extremely Hazardous Substances (40 CFR Part 355)	The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified
SARA Title III Section 311/312 Hazardous Categorization (40 CFR Part 370)	The Superfund Amendments and Reauthorization Act of 1986 (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: No SARA 311/312 hazard categories identified.
SARA Title III Sections 313 (40 CFR Part 372)	This product contains the following components in concentrations above de minimis levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA: No components were identified.
U.S. Inventory (TSCA)	This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.
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 spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.
California Proposition 65	This material may contain the following components which are known to the State of California to cause cancer, birth defects or other reproductive harm, and may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5): Toluene: 0.001%
New Jersey Right-to-Know Label	Petroleum Oil (Hydraulic Fluid)
Additional Regulatory Remarks	No additional regulatory remarks

16.0 OTHER INFORMATION

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

ABBREVIATIONS

AP = Approximately, EQ = Equal, > = Greater Than, < = Less Than, NA = Not Applicable, ND = No Data, NE = Not Established

ACGIH = 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
AIHA = American Industrial Hygiene Association
NTP = National Toxicology Program
OSHA = Occupational Safety and Health Administration
HMIS = Hazardous Materials Information System
EPA = Environmental Protection Agency

Prepared By	Graco, Inc.

This Material Safety Data Sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we have received from sources outside our company. We believe that information to be correct, but cannot guarantee its accuracy or completeness. Health and safety precautions in this Data Sheet may not be adequate for all individuals and/or situations. It is the users' obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either express or implied.

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All written and visual data contained in this document reflects the latest product information available at the time of publication.
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