MATERIAL SAFETY DATA SHEET
Performance Plus Hydraulic Oils AW 22, 32, 46

Wakefield

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Performance Plus Hydraulic Oils AW 22, 32, 46.
SYNONYMS: Petroleum oil; Lube oil; Petroleum hydrocarbon; Lubricant.
PRODUCT CODES: 4400110 / 4400210 / 4400310
MANUFACTURER: Wakefield Canada Inc.
ADDRESS: 3620 Lake Shore Blvd. W
Toronto, Ontario
M8W 1P2

EMERGENCY PHONE: MSDS Coordinator 1-416-252-5511/1-800-268-5339 Ext. 2240 or 2217
PRODUCT USE: For lubricating hydraulic systems.

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT

Component	CAS NO.	% WT
Lubricating oils, petroleum, hydrotreated spent	64742-58-1	14-99
Petroleum distillates, solvent-refined heavy paraffinic	64741-88-4	0-88**
Residual oils (petroleum), hydrotreated	64742-57-0	0-85**
Residual oils (petroleum), solvent dewaxed	64742-62-7	0-100**
Residual oils (petroleum), solvent refined	64742-01-4	0-85**
Phosphorodithioic acid, O, O-di-C1-14-alkyl esters, zinc salt	*	0.1-2
Mineral oil	*	0.1-1

Component Related Regulatory Information
*Supplier advises that this is trade secret.
**Even though the concentration range does not fall under the ranges prescribed by WHMIS, this is the actual range which varies with each batch of product

SECTION 3: HAZARDS IDENTIFICATION

Emergency Overview

Appearance: Amber, red, green, or blue liquid: petroleum odour
Signal Word: CAUTION!
Health Hazards: May be harmful if swallowed. May irritate eyes and skin.

Potential Health Effects

Inhalation: These products are not likely to present an inhalation hazard at normal temperatures and pressures. However, when aerosolizing, misting, or heating these products, high concentrations of generated vapour or mist may irritate the respiratory tract (nose, throat and lungs).

Eyes: May cause irritation.

Skin: May cause irritation. Not likely to be absorbed through the skin in harmful amounts.

Ingestion: May be harmful if swallowed. May cause throat irritation, nausea, vomiting, and diarrhea. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Medical Conditions Aggravated by Exposure: Individuals with pre-existing respiratory tract (nose, throat, and lungs), eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Chronic: Prolonged or repeated inhalation or oil mist may cause oil pneumonia, lung tissue inflammation, and/or fiberous tissue formation. Prolonged or repeated eye contact may cause inflammation of the membrane lining and eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and /or swelling (dermatitis).

Cancer Information: No known carcinogenicity.

Environmental Hazards: Not available.

SECTION 4: FIRST AID MEASURES

EYES: If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm, holding eyelids apart for 15 minutes. Get medical attention.

SKIN: Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists. If products are injected under pressure into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, a Physician should immediately evaluate the individual as a medical emergency. Wash contaminated clothing before use.

INGESTION: Do NOT induce vomiting. Immediately get medical attention. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with the victim.

Notes to Physicians: Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident.

SECTION 5: FIRE-FIGHTING MEASURES

Flammability of the product: Sparks for flame. Products may burn, but does not ignite readily.

Extinguishing Media: Carbon dioxide, regular foam, dry chemical, water spray or water fog. Water or foam may cause frothing.

Hazardous Combustion Products: Decomposition and combustion materials may be toxic. Burning may produce aldehydes, hydrogen sulfide, alkyl mercaptans, sulfides, nitrogen oxides, phosphorus oxides, sulfur oxides, carbon monoxide and unidentified organic compounds.

Products of Combustion: Carbon oxides (CO, CO_2), sulphur oxides (Sox), calcium oxides (CaOx), aldehydes, smoke and irritating vapours as products of incomplete combustion.

Protective Equipment for Firefighters: A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Fire Fighting Equipment/Instructions: Keep storage containers cool with spray water.

Fire and Explosion Hazards: Heated containers may rupture. "Empty" containers may retain residue and can be dangerous. Products are not sensitive to, mechanical impact or static discharge.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Remove all ignition sources. Do not touch or walk through spilled products. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTORLS/PERSONAL PROTECTION.** Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapour or mist. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or absorb with compatible absorbent material and shovel with a clean, spark proof tool into a sealable container for disposal.
Additionally, for large spills: dike for ahead of liquid spill for collection and later disposal.

SECTION 7: HANDLING AND STORAGE

Handling Procedures
Keep away from sparks or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean tools and explosion-proof equipment. When transferring large volumes of product, metal containers, including trucks and tank cars, should be grounded and bonded. These products have a low vapour pressure and are not expected to present an inhalation hazard under normal temperatures and pressures. However, when aerosolizing, misting, or heating these products, do not breathe vapour or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing and shoes.

Shipping and Storage:
Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component Exposure Limits:
None available.

Engineering Controls: Good general ventilation needed to maintain concentration of vapour or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering control airborne levels below applicable exposure limits.

Personal Protective Equipment - Respiratory: Use NIOSH-certified "P" or "R" series particulate filter and organic vapour cartridges when concentration of vapour or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use "N" rated respirators. Selection and use of respiratory protective equipment should be in accordance with CSA Standard Z94.4. Consult a qualified Industrial Hygienist or Safety Professional for respiratory selection guidance.

Personal Protective Equipment – Eyes/Face: Where eye contact is likely, wear safety glasses; contact lens use is not recommended.

Personal Protective Equipment – Skin: Where skin contact is likely, wear neoprene, nitrile, or equivalent protection gloves; use of natural rubber or equivalent is not recommended. When product is heated and skin contact is likely, wear heat-resistant gloves, boots, and other protective clothing. To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant facesheild, boots, apron, coveralls, long sleeve shirts, or other protective clothing.

Personal Protective Equipment – Personal Hygiene: Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard leather articles, such as shoes, saturated with this product.

Other Personal Protective Equipment: Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid.
APPREANCE / ODOUR:	Amber, red, green, or blue liquid; petroleum odour
ODOUR THRESHOLD:	Not available.
FLASH POINT:	356°F (180°C) (minimum) Cleveland Open Cup
VAPOUR PRESSURE:	Less than 0.1 mm Hg at 68°F (20°C)
pH:	Not applicable.
RELATIVE DENSITY:	7.3 LB/US gal (880g/l) (approximately)
SOLUBILITY (H20):	Insoluble.
Boiling Point:	475°F (426°C) (minimum)
Melting Point:	Not available [pour point 21°F (-6°C) (maximum)]
Specific Gravity:	0.88 (water=1) (approximately)
LFL:	Not available.
UFL:	Not available.
Evaporation Rate:	Not available.
Octanol/H20 Coeff:	Not available.
Molecular Weight:	Not applicable.
Auto Ignition:	Not available.

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressures.

INCOMPATIBILTY: Avoid oxidizing agents, reducing agents, and/or acids.

REACTIVITY: Polymerization is not known to occur under normal temperatures and pressures. Not reactive with water.

HAZARDOUS DECOMPOSITION PRODUCTS: None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS.**

CONDITION TO AVOID: Avoid heat, sparks, or flame when not in use.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity Data
Component Analysis – LD50/LC50

Lubricating oil, petroleum, hydrotreated spent (64742-58-1)
Oral LD50 Rat>2000 mg/kg; Dermal LD50 Rat >2000 mg/kg; Dermal LD50 Rabbit >4480 mg/kg
Petroleum distillates, solvent-refined heavy paraffinic (64741-88-4)
Inhalation LC50 Rat 2.18 mg/L h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000mg/kg
Residual oils (petroleum), solvent refined (64742-01-4)
Inhalation LC50 Rat 2.18 mg/L h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000mg/kg
Residual oils (petroleum), solvent dewaxed (64742-62-7)

Inhalation LC50 Rat 2.18 mg/L h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000mg/kg
Mineral Oil (Proprietary)
Oral LD50 Mouse 22 g/kg (related to oil mist, mineral)

Acute Effects: May be harmful if swallowed. May be harmful if inhaled. May irritate the respiratory tract (nose, throat, and lungs), eyes, and sin. May cause nausea, vomiting, and diarrhea. Breathing product into the lungs during ingestion or vomiting may cause injury and possible death.
Component Carcinogenicity: Mineral Oil (Proprietary). ACGIH: A4 – Not classifiable as a Human Carcinogen (highly and severely refined); A2 – Suspended Human Carcinogen (poorly and mildly refined, related to oil mist, mineral.
Sensitization: Based on best current information, there is no known human sensitization associated with these products
Mutagenicity: Experimental evidence suggests that these products do not cause mutagenesis.
Reproductive Toxicity: Based on best current information, there is no known reproductive toxicity associated with these products.
Teratogenicity: Based on best current information, there is no known teratogenicity associated with these products.
Toxicologically Synergistic Products: Based on best current information, there is no known toxicologically synergistic products associated with these products.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: No information available.
Component Analysis – Ecotoxicity – Aquatic Toxicity

Lubricating oils, petroleum, hydrotreated spent (64742-58-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Brachydanio rerio	76.6 ml/L [semi static]	
96 Hr LC50 Pimephales promelas	3.2 mg/L [semi static]	

Petroleum distillates, solvent-refined heavy paraffinic (64741-88-4)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	>5000 mg/L	

Residual oils (petroleum), solvent refined (647-01-4)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	>5000 mg/L	

Residual Oil (petroleum), solvent dewaxed (64742-62-7)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	>5000 mg/L	

Phosphorodithioic acid, O, O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	1.0 - 5.0 mg/L [semi-static]	
96 Hr LC50 Pimephales promelas	10.0 – 35.0 mg/L	

Persistence/Degradability: May cause long-tern adverse effects in the aquatic environment.
Bioaccumulation/Accumulation: No data available for this product
Mobility in Environment Media: No information for this product.
Other adverse Effects: No additional information available.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: Dispose in accordance with federal, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste.

SECTION 14: TRANSPORT INFORMATION

TDG: Not regulated as a dangerous good.

SECTION 15: REGULATORY INFORMATION

Canadian Regulations: These products have been classified in accordance with hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all information required by the CPR.

Canadian WHMIS Information: Not regulated.

Canadian Environmental Protection Act (CEPA): All components of these products are listed on, or are automatically included as "substance occurring in nature" on, or are example from the requirements to be listed on, the Canadian Domestic Substance List (DSL).

SECTION 16: OTHER INFORMATION

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