Safety Data Sheet

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name: BOSS INDUSTRIAL HYDRAULIC 22, 32, 46, 68, 100

Synonyms: Petroleum oil, Lube oil, Petroleum hydrocarbon, Lubricant

Recommended Use: For lubricating hydraulic systems. If this product is used in combination with other products, refer to the Safety Data Sheet for those products.

Restrictions on Use: None Known.

Details of the supplier of the safety data sheet

Manufacturer: BOSS Lubricants Ltd.
6303 30 St SE
Calgary, Alberta, T2C 1R4

Information Phone: 1-800-844-9457

Website: www.bosslubricants.com

In an Emergency

Canada Call CANUTEC: (613) 996-6666

U.S.A. Call CHEMTREC (800) 424-9300

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Section 2: HAZARDS IDENTIFICATION

Classification in Accordance with 29 CFR 1910.1200.: Not hazardous per classification criteria.

GHS LABEL ELEMENTS

Symbol(s): None needed per classification criteria.

Signal Word: None needed per classification criteria.

Hazard Statement(s): None needed per classification criteria.

Precautionary Statement(s)

Prevention: None needed per classification criteria.

Response: None needed per classification criteria.

Storage: None needed per classification criteria.

Disposal: Dispose of in accordance with all applicable federal, state and local regulations.

Hazard(s) Not Otherwise Classified: Repeated exposure may cause skin dryness or cracking.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component	Percent
64742-58-1	Lubricating oils, petroleum, hydrotreated spent	14-99
64741-88-4	Petroleum distillates, solvent-refined heavy paraffinic	0-85**
64742-57-0	Residual oils (petroleum), hydrotreated	0-85**
64742-62-7	Residual oils (petroleum), solvent dewaxed	0-100**
64742-01-4	Residual oils (petroleum), solvent refined	0-85**

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*	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	0.1-2
*	Mineral Oil	0.1-1

Component Related Regulatory Information: Supplier advises that this is a trade secret.

Section 4: FIRST AID MEASURES

Description of Necessary Measures

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention, if needed.

Skin: Wash with plenty of soap and water. Get medical attention if needed.

Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if needed.

Ingestion: Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms/Effects

Acute: No information on significant adverse effects.

Delayed: No information on significant adverse effects.

Indication of Immediate Medical Attention and Special Treatment Needed, If Needed: Treat Symptomatically and supportively. Call 1-800-468-1760 for additional information.

Section 5: FIRE FIGHTING MEASURES

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

Unsuitable Extinguishing Media: Do not use high-pressure water streams.

Specific Hazards Arising from the Chemical: Negligible fire hazard. Avoid friction, static electricity and sparks.

Hazardous Combustion Products: Decomposition and combustion materials may be toxic. Burning may produce sulfur oxides, aldehydes, ketones, carbon monoxide, and unidentified compounds.

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

Fire Fighting Measures: Move container from fire area if it can be done without risk. Keep storage containers cool with water spray. Heated containers may rupture or be thrown into the air. "Empty" containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact.

NFPA Ratings: **Health:** 1 **Fire:** 1 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment.

Methods and Materials for Containment and Clean Up: 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 Controls/Personal Protection*****.** Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or absorb with compatible sorbent material and shovel with a clean, spark proof tool into a sealable container for disposal. Additionally, for large spills: Dike far ahead of liquid spill for collection and later disposal.

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There may be specific federal regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see Section 15: Regulatory Information.

Section 7: HANDLING AND STORAGE

Precautions for Safe Handling: 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 vapor 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 vapor or mist. Use in a well-ventilated area. Avoid contact with eyes, skin, clothing, and shoes.

Conditions for Safe Storage, Including Any Incompatibilities: 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.

Incompatibilities: Strong oxidizing materials.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits: ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

Appropriate Engineering Controls: Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls.

Individual Protective Measures, such as 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 regulatory requirements. The following PPE should be considered the minimum required Safety glasses, lab coat or apron.

Eyes/Face Protection: Safety glasses with side shields should be worn at a minimum. Additional protection like goggles, face shields, or respirators may be needed dependent upon anticipated use and concentrations of mists or vapors. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. Contact lens use is not recommended.

Skin Protection: Where skin contact is likely, wear neoprene, nitrile, or equivalent protective gloves; use of natural rubber or equivalent gloves is not recommended.

Respiratory Protection: No respiratory protection is normally required. Use NIOSH-certified P- or R- series particulate filter and organic vapor cartridges when concentration of vapor 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 in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4. Consult with a health and safety professional for specific respirators appropriate for your use.

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Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Amber liquid	**Solubility (H2O):**	Insoluble
Odor:	petroleum odor	**Odor Threshold:**	Not available
pH:	Not applicable	**Melting Point:**	Not available [pour point 21ºF (-6C) (maximum)]
Boiling Point:	475ºF (246ºC) (minimum)	**Density:**	7.3 LB/US gal (880 g/L) (approximately)
Specific Gravity:	0.88 (water = 1) (approximately)	**Octanol/H2O Coeff.:**	Not available
Evaporation Rate:	Not available	**Auto Ignition Temperature:**	Not Available
LFL:	Not available	**Flash Point:**	329°F (165°C) (minimum)
UFL:	Not available	**Vapor Pressure:**	Less than 0.1 mm Hg at 68ºF (20ºC)
Other Property Information:	No information is available.	**Viscosity:**	>20.5 mm^2/s @ 104°F (40°C)

Section 10: STABILITY AND REACTIVITY

Reactivity: No reactivity hazard is expected.
Chemical Stability: Stable under normal temperatures and pressures.
Possibility of Hazardous Reactions: Will not polymerize.
Conditions To Avoid: Avoid sparks, flames, or other sources of ignition.
Incompatible Materials: Avoid oxidizing agents.
Hazardous Decomposition Products: None under normal temperatures and pressures.

Section 11: TOXICOLOGICAL INFORMATION

Toxicity Data and Information

Component Analysis - LD50/LC50

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

Dermal LD50 Rabbit >4480 mg/kg;
Oral LD50 Rat >2000 mg/kg

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

Dermal LD50 Rabbit >2000 mg/kg;
Inhalation LC50 Rat 2.18 mg/L 4 h;
Oral LD50 Rat >5000 mg/kg

Information on Likely Routes of Exposure

Inhalation: No information on significant adverse effects.
Ingestion: May be harmful if swallowed.
Skin Contact: Repeated exposure may cause skin dryness or cracking.
Eye Contact: No information on significant adverse effects.
Immediate Effects: No information on significant adverse effects.
Delayed Effects: No information on significant adverse effects.
Irritation/Corrosivity: May cause slight skin and respiratory irritation.
Respiratory Sensitization: No information available for the product.
Skin Sensitization: No information available for the product.
Carcinogenicity

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Component Carcinogenicity: None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.
Germ Cell Mutagenicity: No information available for the product.
Teratogenicity: No information available for the product.
Reproductive Effects: No epidemiological data is available for this product.
Specific Target Organ Effects - Single Exposure: No information on significant adverse effects.
Specific Target Organ Effects - Repeated Exposure: No information on significant adverse effects.
Aspiration Hazard: No data available.
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.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity: Toxic to aquatic life.

Component Analysis - Ecotoxicity - Aquatic Toxicity

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

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Brachydanio rerio	79.6 mg/L [semi-static]	
96 Hr LC50 Pimephales promelas	3.2 mg/L [semi-static]	

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

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	>5000 mg/L	
48 Hr EC50 Daphnia magna	>1000 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 [static]	
96 Hr LC50 Pimephales promelas	10.0 - 35.0 mg/L [semi-static]	
48 Hr EC50 Daphnia magna	1 - 1.5 mg/L	

Persistence and Degradability: No information available for the product.
Bioaccumulation Potential: No information available for the product.
Mobility in Soil: No information available for the product.
Other Adverse Effects: No additional information is available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Methods: Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.
This product, if discarded, is not expected to be a characteristic or listed hazardous waste. If recycled in the USA, this product can be managed in accordance with the used oil exemption under 40 CFR Part 279. Processing, use, or contamination by the user may change the waste code(s) applicable to the disposal of these products.

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Section 14: TRANSPORT INFORMATION

Basic Description Not classified as hazardous for transport (DOT, TDG, IMO/IMDG, IATA/ICAO).

DOT

Proper Shipping Name: No data available.
UN Number: No data available.
Hazard Class: No data available.
Packing Group: No data available.

TDG

Proper Shipping Name: No data available.
UN Number: No data available.
Hazard Class: No data available.
Packing Group: No data available.

IMDG

Proper Shipping Name: No data available.
UN Number: No data available.
Hazard Class: No data available.
Packing Group: No data available.
Marine Pollutant: No data available.

IATA

Proper Shipping Name: No data available.
UN Number: No data available.
Hazard Class: No data available.
Packing Group: No data available.

Section 15: REGULATORY INFORMATION

Volatile Organic Compounds (As Regulated): Negligible As per 40 CFR Part 51.100(s)

Federal Regulations

SARA 302/304

Component Analysis: Based on the ingredient(s) listed in Section 3, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA 311/312 Hazardous Categories

Acute Health: No **Chronic Health:** No **Fire:** No **Reactive:** No

SARA Section 313

Component Analysis: This product contains a "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

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

1.0 % de minimis concentration (related to Zinc compounds)

CERCLA

Component Analysis: Based on the ingredient(s) listed in SECTION 3, this product does not contain any "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.

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TSCA Inventory: All the components of these products are listed on, or are automatically included as "naturally occurring chemical substances" on, or are exempted from the requirement to be listed on, the TSCA Inventory.

Component Analysis

Component	CAS #	TSCA
Lubricating oils, petroleum, hydrotreated spent	64742-58-1	Yes
Residual oils (petroleum), solvent dewaxed	64742-62-7	Yes
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	Yes

U.S. State Regulations: The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	MA	MN	NJ	PA	CA
Phosphorodithioic acid, O,O-di-C114-alkyl esters, zinc salts ([1]related to: Zinc compounds)	68649-42-3	Yes[1]	No	No	Yes[1]	Yes[1]

No component(s) are listed under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).

Canadian Regulations

Component Analysis

Component	CAS #	CAN
Lubricating oils, petroleum, hydrotreated spent	64742-58-1	DSL
Residual oils (petroleum), solvent dewaxed	64742-62-7	DSL
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	DSL

Canadian WHMIS Information: Not regulated.

Component Analysis: Not regulated.

Section 16 - OTHER INFORMATION

Revision Information: Update due to expiry

References

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

BOD: Biochemical Oxygen Demand

°C: Celsius

CAS: Chemical Abstracts Service

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act

CFR: Code of Federal Regulations

CPR: Controlled Products Regulations

DOT: United States Department of Transportation

DSL: Domestic Substances List

EPA: Environmental Protection Agency

°F: Fahrenheit

IMDG: International Maritime Dangerous Goods

IUCLID: International Uniform Chemical Information Database

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

RTK: Right-to-Know

SARA: Superfund Amendments and Reauthorization Act

STEL: Short-term Exposure Limit

TDG: Transportation of Dangerous Goods

TLV: Threshold limit value

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GHS:	Globally Harmonized System of Classification and Labeling of Chemicals	**TSCA:**	Toxic Substances Control Act
HMIS:	Hazardous Materials Identification System	**TWA:**	Time weighted average
IARC:	International Agency for Research on Cancer	**UN:**	United Nations
IATA:	International Air Transportation Association	**WHMIS:**	Workplace Hazardous Materials Information System
IDLH:	Immediately Dangerous to Life or Health		

Disclaimer: This safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in the data sheet which we have received from outside sources and we believe the 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 user's obligation to evaluate and use this product in a safe manner and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either expressed or implied.

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