



Material Safety Data Sheet

Section 1: Chemical Product and Company Identification

Material Name: BOSS SYN HYD 32 HYDRAULIC OIL

Product Use: For lubricating hydraulic systems.

If these products are used in combination with other products, refer to the Material Safety Data Sheets for those products.

Synonyms: Petroleum oil; Lube oil; Petroleum hydrocarbon; Lubricant.

Boss Lubricants

112, 6303 30 St. SE

Calgary, AB

T2C 1R4

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Emergency Phone Number(s)

Business: (800) 844-9457

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Section 2: Hazardous Identification

EMERGENCY OVERVIEW

Appearance: Amber liquid; petroleum odor.

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 vapor 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 of oil mist may cause oil pneumonia, lung tissue inflammation, and/or fibrous tissue formation. Prolonged or repeated eye contact may cause inflammation of the membrane lining the 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. For more information, see **SECTION 11: CARCINOGENICITY**. Also see **SECTION 15: CALIFORNIA**.

Environmental Hazards: Not available. Also see **SECTION 12: ECOLOGICAL INFORMATION**.



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**
*	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.

**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 the product.

Section 4: First Aid Measures

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 victim. Get medical attention if breathing difficulty persists.

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 water, 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 reuse.

Ingestion: Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. 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.

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

Section 5: Fire Fighting Measures

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.

Conditions of Flammability: Sparks or 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.

Protective Equipment for Firefighting: 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 water spray.

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



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

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 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, sparkproof tool into a sealable container for disposal. Additionally, for large spills: Dike far 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 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.

Shipping and Storing: 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: Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits.

Personal Protective Equipment

Respiratory: 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 a qualified Industrial Hygienist or Safety Professional for respirator selection guidance.

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

Skin: Where skin contact is likely, wear neoprene, nitrile, or equivalent protective gloves; use of natural rubber or equivalent gloves 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 faceshield, boots, apron, coveralls, long sleeve shirts, or other protective clothing.



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 these products.

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 & Chemical Properties

Appearance/Odor:	Amber liquid; petroleum odor.	pH:	Not applicable
Boiling Point:	475°F (246°C) (minimum)	Physical State:	Liquid
Melting Point:	Not available [pour point 21°F (-6C) (maximum)]	Molecular Weight:	Not applicable
Solubility (H2O):	Insoluble	Evaporation Rate:	Not available
Specific Gravity:	0.88 (water = 1) (approximately)	Octanol/H2O Coeff.:	Not available
Density:	7.3 LB/US gal (880 g/L) (approximately)	Auto Ignition:	Not available.
Odor Threshold:	Not available	LFL:	Not available
Flash Point:	356°F (180°C) (minimum) Cleveland Open Cup	UFL:	Not available
Vapor Pressure:	Less than 0.1 mm Hg at 68°F (20°C)		

Section 10: Chemical Stability & Reactivity Information

Stability: Stable under normal temperatures and pressures.

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

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

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

Conditions to Avoid: Avoid heat, sparks, or flame when not in use.

Section 11: Toxicological Information

Toxicity Data

Component Analysis - LD50/LC50

Lubricating oils, 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 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

Residual oils (petroleum), solvent refined (64742-01-4)

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

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

Inhalation LC50 Rat 2.18 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/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 skin. May cause nausea, vomiting, and diarrhea. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.





Component Carcinogenicity

Mineral Oil (Proprietary)

ACGIH: A4 - Not Classifiable as a Human Carcinogen (highly and severely refined); A2 - Suspected 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.

Also see **SECTION 15: CALIFORNIA.**

Teratogenicity: Based on best current information, there is no known teratogenicity associated with these products.

Toxicologically Synergistic Products: Based on best current information, there are 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	79.6 mg/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 (64742-01-4)

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

Residual oils (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 [static]	
96 Hr LC50 Pimephales promelas	10.0 - 35.0 mg/L [semi-static]	

Persistence/Degradability: May cause long-term adverse effects in the aquatic environment.

Bioaccumulation/Accumulation: No data available for this product.

Mobility in Environmental Media: No information available for the product.

Other Adverse Effects: No additional information available.

Section 13: Disposal Considerations

Disposal Instructions: 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 BOSS Lubricants regarding proper recycling or disposal.



US EPA Waste Number & Descriptions: These products, if discarded, are not expected to be a characteristic or listed hazardous waste. If recycled in the USA, they 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.

Section 14: Transportation Information

Emergency Response Guide Number: Reference *North American Emergency Response Guidebook*
DOT Shipping Name: Not regulated as a hazardous material.
TDG Shipping Name: Not regulated as a dangerous good.
IATA Information: No Classification Assigned.
IMDG Information: No Classification Assigned.

Section 15: Regulatory Information

SARA Sections 311/312

These products pose the following health hazard(s) as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):
 Immediate (Acute) Health Hazard
 Delayed (Chronic) Health Hazard

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 Section 313**

Component Analysis: This product does contain 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 (Chemical Category N982, 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. **TSCA**

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), hydrotreated	64742-57-0	Yes
Petroleum distillates, solvent-refined heavy paraffinic	64741-88-4	Yes
Residual oils (petroleum), solvent refined	64742-01-4	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

State Regulations

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-C1-14alkyl esters, zinc salts ('related to: Zinc compounds)	68649-42-3	Yes ¹	No	No	Yes ¹	Yes ¹
Mineral Oil ('related to: Oil mist, mineral)	Proprietary	Yes ¹	Yes ¹	Yes ¹	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: These products have been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

Component Analysis

Component	CAS #	CAN
Lubricating oils, petroleum, hydrotreated spent	64742-58-1	DSL
Residual oils (petroleum), hydrotreated	64742-57-0	DSL
Petroleum distillates, solvent-refined heavy paraffinic	64741-88-4	DSL
Residual oils (petroleum), solvent refined	64742-01-4	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.

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

Section 16: Other Information

Label/Other Information: Not available.

Revision Information New Issue MSDS.

Disclaimer

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, BOSS Lubricants assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information or the product to which the information refers. The data contained on this sheet apply to the product as supplier to the user.