



Safety Data Sheet

Section 1: Identification of the substance/mixture and of the company/undertaking

Product Identifier: **BOSS HEAVY DUTY EXTREME DIESEL ENGINE OILS API CK-4**
Includes Grades 10W-30, 15W-40

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

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

Restrictions on Use: None known.

Manufacturer: BOSS Lubricants Phone: 1-403-279-2223
6303 30 Street SE Emergency # 1-800-844-9457
Suite 112 www.bosslubricants.com
Calgary, AB T2C 1R4

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Section 2: Hazard(s) Identification

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

GHS LABEL ELEMENTS

Symbol(s): None needed according to classification criteria.

Signal Word: None needed according to classification criteria.

Hazard Statement(s): None needed according to classification criteria.

Precautionary Statement(s)

Prevention: None needed according to classification criteria.

Response: None needed according to classification criteria.

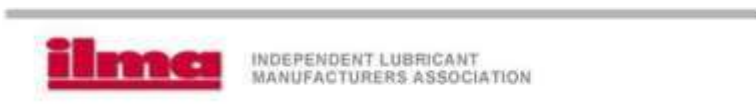
Storage: None needed according to classification criteria.

Disposal: Dispose in accordance with all applicable 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	35-85
72623-83-7	Lubricating oils (petroleum), C>25, hydrotreated bright stock	0.1-55
64742-62-7	Residual oils (petroleum), solvent dewaxed	0.1-55
64742-57-0	Residual Oils (petroleum), hydrotreated	0.1-55
64742-01-4	Residual oils (petroleum), solvent refined	0-46
Not Available	Mineral Oil*	0.1-37.5
Not Available	Proprietary additives*	10-30





64741-88-4	Petroleum distillates, solvent-refined heavy paraffinic	1-15
122-39-4	Diphenylamine	1-15
72623-86-0	Lubricating oils, petroleum, C15-30, hydrotreated neutral oil-based	0.1-11
---	Mixture**	0-5

Component Related Regulatory Information

*Supplier advises that this is a trade secret.

** Mixture of the following CAS #: Poly olefin, 64742-65-0, Polyolefin amide alkene amine, 64742-52-5, 178603-65-1, 178603-64-0, 64742-46-7, 72623-84-8, 178603-63-9, 178603-66-2, 72623-87-1, 8042-47-5, 445411-73-4, Calcium sulfonate, Alkylated phenol, Alkylamine, 74499-35-7, 68411-46-1, 68649-42-3, Calcium phenate, 72723-85-9

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 1-800-428-1760 for additional information.

Section 5: Fire-Fighting Measures

- Suitable Extinguishing Media:** Carbon dioxide, regular foam, dry chemical, water spray, or water fog.
- 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 smoke, carbon dioxide, carbon monoxide, unidentified organic compounds, metal oxides, nitrogen oxides, hydrogen sulfide, sulfur oxides, oxides of phosphorus, and oxides of zinc.
- 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. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Keep unnecessary people away, isolate hazard area and deny entry.

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 product. 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. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, spark proof tool into a sealable container for disposal. Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

Section 7: Handling and Storage

Precautions for Safe Handling: Keep away from sparks and 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 products, metal containers, including trucks and tank cars, should be grounded and bonded. This product has a low vapor pressure and is not expected to present an inhalation hazard under normal temperatures and pressures. However, when aerosolizing, misting, or heating this product, 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: Oxidizing materials, acids.

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: 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.

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, gloves, lab coat, or apron.

Eyes/Face Protection: Safety glasses with side shields should be worn at a minimum. Additional protection such as goggles, face shields, or respirators may be needed depending 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 gloves impervious to product; use of natural rubber (latex) or equivalent gloves is not recommended. When product is heated and skin contact is likely, wear heat-resistant gloves, boots, and other protective clothing.

Respiratory Protection: No respirator is required under normal conditions of use. 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.

Section 9: Physical & Chemical Properties

Appearance:	Amber liquid,	Molecular Weight:	Not available.
Odor:	Petroleum odor	Auto Ignition Temperature:	Not available
Odor Threshold:	Not available	LFL:	Not available
pH:	Not available	Flash Point:	421°F (216°C) (minimum)
Boiling Point:	475°F (246°C) (minimum)	UFL:	Not available
Melting Point:	Not available	Viscosity:	Not available
Solubility (H2O):	Insoluble.	Vapor Pressure:	Less than 0.1 mm Hg at 68°F (20°C)
Specific Gravity:	0.88 (water = 1) (approximately)	Vapor Density:	Not available
Density:	7.3 LB/US gal (880 g/l) (approximately)	Other Property Information:	No information is available.
Octanol/H2O Coeff.:	Not available.	Viscosity:	>20.5 mm ² /s @ 104°F (40°C)
Evaporation Rate:	0.1 (butyl acetate = 1) (based on Stoddard Solvent)		

Section 10: - Stability & 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, and other sources of ignition.
Incompatible Materials:	Avoid oxidizing agents and acids.
Hazardous Decomposition Products:	None under normal temperatures and pressures.

Section 11: Toxicological Information

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





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

Lubricating oils (petroleum), C>25, hydrotreated bright stock (72623-83-7)

Oral LD50 Rat >5000 mg/kg

Lubricating oils, petroleum, C15-30, hydrotreated neutral oil-based (72623-86-0)

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

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]

Information on Likely Routes of Exposure

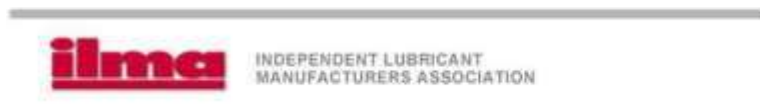
Inhalation:	No information on significant adverse effects.
Ingestion:	May be harmful if swallowed.
Skin Contact:	Prolonged or repeated skin contact may cause irritation.
Eye Contact:	No information on significant adverse effects.
Immediate Effects:	No information on significant adverse effects.
Delayed 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

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.
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), central nervous system, kidney, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Section 12: Ecological Information

Ecotoxicity: Harmful to aquatic life. Avoid release to the environment.

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 refined (64742-01-4)

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

Methods of Elimination: 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.

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 this product.





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 **Pressure:** 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.

Zinc alkyl dithiophosphate (Not Available): 1.0 % de minimis concentration (related to Zinc compounds)

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.





TSCA Inventory: All the components of this product 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 refined	64742-01-4	Yes
Residual oils (petroleum), solvent dewaxed	64742-62-7	Yes
Lubricating oils (petroleum), C>25, hydrotreated bright stock	72623-83-7	Yes
Lubricating oils, petroleum, C15-30, hydrotreated neutral oil-based	72623-86-0	Yes
Petroleum distillates, solvent-refined heavy paraffinic	64741-88-4	Yes
N-Phenylbenzenamine, reaction products with 2,4,4-trimethylpentene	68411-46-1	Yes
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	Yes

U.S. State Regulations: None of this product's components are listed on the state lists from CA, MA, MN, NJ, or PA. No component(s) are listed under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

Canadian Regulations: This product has 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), solvent refined	64742-01-4	DSL
Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C20-40, branched and cyclic, high viscosity index	178603-65-1	DSL
Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C25-55, branched and cyclic, high viscosity index	178603-66-2	DSL
Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C15-30, branched and cyclic, high viscosity index	178603-64-0	DSL
Benzenesulfonic acid, mono-C16-24-alkyl derivatives, calcium salts, overbased	70024-71-4	DSL
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	DSL

Canadian WHMIS Information: Not regulated.

Component Analysis – WHMIS IDL: Not regulated.

Section 16: Other Information

Revision Information: Update to product branding.

References

- ACGIH:** American Conference of Governmental Industrial Hygienists
- AIHA:** American Industrial Hygiene Association
- CFR:** Code of Federal Regulations
- DOT:** United States Department of Transportation
- GHS:** Globally Harmonized System of Classification and Labeling of Chemicals
- HMIS:** Hazardous Materials Identification System
- IARC:** International Agency for Research on Cancer
- IATA:** International Air Transportation Association





IDLH: Immediately Dangerous to Life or Health
IMDG: International Maritime Dangerous Goods
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
TLV: Threshold limit value
TSCA: Toxic Substances Control Act
TWA: Time weighted average
UN: United Nations
WHMIS: Workplace Hazardous Materials Information System

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.

