



# SAFETY DATA SHEET

Issuing Date 22-Oct-2019

Revision date 22-Oct-2022

Revision Number 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** BOSS PREMIUM FULL SYNTHETIC AUTOMOTIVE ENGINE OIL ZR-1  
**Includes Grades** 0W-20, 5W-20, 5W-30, 10W-30

### Other means of Identification

**Product Code** GHSRBS-102

**Synonyms:** Synthetic blend petroleum oil; Lube oil; Petroleum hydrocarbon; Lubricant.

### Recommended use of the chemical and restrictions on use

**Recommended use** For lubricating passenger car motors. If these products are used in combination with other products, refer to the Material Safety Data Sheet for those products.

**Restrictions on use** No information available

### Details of the supplier of the safety data sheet

<u>Initial supplier identifier</u>	<u>Manufacturer Address</u>
BOSS Lubricants	112, 6303 30 Street SE Calgary, AB T2C 1R4

### Emergency Phone Number(s)

**Initial supplier phone number** (800) 844-9457  
**Emergency Telephone** Chemtrec 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

### Classification

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS) Not a hazardous substance or mixture according to Canada's Hazardous Product Regulations.

### 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.

<b>Storage</b>	None needed according to classification criteria.
<b>Disposal</b>	Dispose of in accordance with all applicable federal, Provincial and local regulations
<b>Hazard(s) Not Otherwise Classified</b>	Repeated exposure may cause skin dryness or cracking.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Component	Percent
64742-58-1	Lubricating oils, petroleum, hydrotreated spent	80-85
178603-65-1	Gas oils, petroleum, vacuum, hydrocracked, hydro-isomerized, hydrogenated, C20-40, branched and cyclic, high viscosity index	0-5
8042-47-5	Mineral Oil	0-15
68649-42-3	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	0-2

### 4. FIRST AID MEASURES

<b>Inhalation</b>	Remove person to fresh air and keep comfortable for breathing. Get medical attention if needed.
<b>Eyes</b>	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical attention if needed.
<b>Skin</b>	Wash with plenty of soap and water. Get medical attention if needed.
<b>Ingestion</b>	Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.
<b><u>Important Symptoms/Effects</u></b>	
<b>Acute</b>	No information on significant adverse effects.
<b>Delayed</b>	No information on significant adverse effects.
<b><u>Indication of any immediate medical attention and special treatment needed</u></b>	
<b>Note to Physicians</b>	Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Call 1-800-844-9457 for additional information

### 5. FIRE FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Carbon dioxide, regular foam, dry chemical, water spray, or water fog. Water or foam may cause frothing.
<b>Unsuitable Extinguishing Media</b>	None known.
<b>Specific Hazards Arising from the Chemical</b>	Negligible fire hazard. "Empty" containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact or static discharge.

<b>Hazardous Combustion Products</b>	Decomposition and combustion materials may be toxic. Burning may produce aldehydes, hydrogen sulfide, alkyl mercaptans, sulfides, carbon monoxide, and oxides of sulfur, calcium and zinc and other unidentified organic compounds.			
<b>Conditions of Flammability</b>	Sparks, or flame. Product may burn but does not ignite readily.			
<b>Protective Equipment for Firefighters</b>	A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.			
<b>Fire Fighting Instructions:</b>	Keep storage containers cool with water spray.			
<b>NFPA Ratings:</b>	<b>Health: 1</b>	<b>Fire: 1</b>	<b>Reactivity: 0</b>	
Hazard Scale: 0 = Minimal	1 = Slight	2 = Moderate	3 = Serious	4 = Severe

## 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures:

**Personal Precautions** Wear personal protective clothing and equipment, see Section 8.

### **Methods and Materials for Containment and Clean Up:**

**Methods for Containment** Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. 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.

Additionally, for large spills: Dike far ahead of liquid spill for collection and later disposal.

**Methods for Clean Up** 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.

## 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 product, 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**

<b>Storage Conditions</b>	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 flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous.
<b>Incompatibilities</b>	Strong oxidizing materials.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

<b>Component Exposure Limits</b>	Canada, OSHA, NIOSH, and ACGIH have not developed exposure limits for any of this product's components.
<b>Engineering Controls</b>	Provide general ventilation. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls.
<b><u>Individual Protection Measures, such as Personal Protective Equipment</u></b>	
<b>Eye/face protection</b>	Wear safety glasses. Additional protection like goggles, face shields, or respirators may be needed dependent upon anticipated use and concentrations of mists or vapors. Eye wash fountain and emergency showers are recommended. Contact lens use is not recommended.
<b>Respiratory Protection</b>	A respiratory protection program which meets USA's OSHA General Industry Standard 29 CFR 1910.134 or Canada's CSA Standard Z94.4-M1982 requirements must be followed whenever workplace conditions warrant a respirator's use. Consult a qualified Industrial Hygienist or Safety Professional for respirator selection guidance.
<b>Glove Recommendations</b>	Where skin contact is likely, wear chemical impervious protective gloves; use of natural rubber or equivalent gloves is not recommended. When products are 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 face shield, boots, apron, coveralls, long sleeve shirts, or other protective clothing.
<b>Protective Materials</b>	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, and lab coat or apron.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information of basic physical and chemical properties

Physical State	Liquid
Appearance	Amber
Colour	Amber
Odor	Petroleum Distillates
Odor Threshold	No Information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No Data Available	None Known
Melting point/Freezing Point	No Data Available	None Known
Boiling Point / Boiling Range	246°C (475°F) (minimum)	ASTM D7213
Flash Point:	218°C - 236°C	ASTM D92
Evaporation Rate:	No Data Available	None Known
Flammability (solid, gas)	No Data Available	None Known
<b><u>FLAMMABLE LIMITS IN AIR</u></b>		
Upper flammability or explosive limits	No Data Available	
Lower flammability or explosive limits	No Data Available	
Vapor Pressure	less than 0.1 mmHg at 20°C (68°F)	
Vapor Density	No Data Available	None Known
Relative Gravity:	863-872	D4052
Water Solubility	Insoluble in water	None Known
Solubility in other solvents	No Data Available	None Known
Partition coefficient	No Data Available	None Known
Autoignition Temperature:	No Data Available	None Known
Decomposition temperature	No Data Available	None Known
Kinematic viscosity	46.2-67.2 cSt @ 40°C	ASTM D445
Dynamic viscosity	No Data Available	None Known
Pour Point:	-18°C (0°F) (maximum)	
<b><u>Other information</u></b>		
Explosive properties	No Data Available	
Oxidizing properties	No Data Available	
Softening point	No Data Available	
Molecular weight	No Data Available	
VOC Content (%)	No Data Available	
Liquid Density	No Data Available	

## 10. STABILITY AND REACTIVITY

Stability	Stable under normal temperatures and pressures.
Conditions to Avoid	Avoid sparks or flame when not in use.
Incompatibility	Avoid oxidizing agents, acids and reactive halogens.
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.**

## 11. TOXICOLOGICAL INFORMATION

### Information on Likely Routes of Exposure

<b>Inhalation</b>	No information on significant adverse effects.
<b>Skin Contact</b>	Prolonged or repeated exposure may cause skin dryness or cracking.
<b>Eye Contact</b>	No information on significant adverse effects.
<b>Ingestion</b>	May be harmful if swallowed. Acute and Chronic Toxicity

### TOXICITY DATA

#### Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published

#### Lubricating oils, petroleum, hydrotreated spent (64741-88-4)

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/4H
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
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#### Residual oils (petroleum), solvent dewaxed (64742-62-7)

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

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

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

#### Lubricating oils, petroleum, C20-50, hydrotreated neutral oil-based (72623-87-1)

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

#### Petroleum distillates, hydrotreated heavy naphthenic (64742-52-5)

Oral LD50	Rat >5000 mg/kg;
Dermal LD50	Rabbit >2000 mg/kg

### Product Toxicity Data

#### Acute Toxicity Estimate

Dermal > 2000 mg/kg

Oral > 2000 mg/kg

<b>Immediate Effects</b>	No information on significant adverse effects.
<b>Delayed Effects</b>	No information on significant adverse effects.
<b>Irritation/Corrosivity Data</b>	May cause slight skin and respiratory irritation.
<b>Respiratory Sensitization</b>	No information on significant adverse effects.
<b>Dermal Sensitization</b>	No information for the product.
<b>Component Carcinogenicity</b>	None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA
<b>Germ Cell Mutagenicity</b>	No information available for the product.
<b>Tumorigenic Data</b>	No information available for the product.
<b>Reproductive Toxicity</b>	No data available for this product.
<b><u>Specific Target Organ Toxicity</u></b>	
<b>Single Exposure</b>	No information on significant adverse effects.
<b>Repeated Exposure</b>	No target organs identified.
<b>Aspiration hazard</b>	No data available.
<b>Medical Conditions</b>	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.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity:** Harmful to aquatic life with long lasting effects.

### Component Analysis - Ecotoxicity - Aquatic Toxicity

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

Species	Test & Results
Fish:	LC50 96 h Oncorhynchus mykiss >5000 mg/L
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L IUCLID

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

Species	Test & Results
Fish:	LC50 96 h Oncorhynchus mykiss >5000 mg/L
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L IUCLID

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

Species	Test & Results
Fish:	LC50 96 h Oncorhynchus mykiss >5000 mg/L
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L IUCLID

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

<b>Species</b>	<b>Test &amp; Results</b>
Fish:	LC50 96 h Lepomis macrochirus >10000 mg/L
<b>Lubricating oils, petroleum, hydrotreated spent 64742-58-1</b>	
<b>Species</b>	<b>Test &amp; Results</b>
Fish:	LC50 96 h Brachydanio rerio 79.6 mg/L [semi-static];
	LC50 96 h Pimephales promelas 3.2 mg/L [semi-static]
<b>Lubricating oils, petroleum, C20-50, hydrotreated neutral oil-based (72623-87-1)</b>	
<b>Species</b>	<b>Test &amp; Results</b>
Fish:	LC50 96 h Oncorhynchus mykiss >5000 mg/L
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L IUCLID
<b>Petroleum distillates, hydrotreated heavy naphthenic (64742-52-5)</b>	
<b>Species</b>	<b>Test &amp; Results</b>
Fish:	LC50 96 h Oncorhynchus mykiss >5000 mg/L
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L IUCLID
<b>Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)</b>	
<b>Species</b>	<b>Test &amp; Results</b>
Fish:	LC50 96 h Pimephales promelas 1 - 5 mg/L [static ]
	LC50 96 h Pimephales promelas 10 - 35 mg/L [semi-static ]
Invertebrate:	EC50 48 h Daphnia magna 1 - 1.5 mg/L IUCLID
<b>Persistence/Degradability</b>	No information available.
<b>Bioaccumulation/ Accumulation</b>	No information available.
<b>Mobility in Environmental Media</b>	No information available.

### 13. DISPOSAL CONSIDERATIONS

#### Disposal Methods

Dispose of contents/container in accordance with local/regional/national/international regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. This product, if discarded, is not expected to be a characteristic or listed hazardous waste. If recycled in the USA, it 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.



**14. TRANSPORT INFORMATION**

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

**DOT**

**Proper Shipping Name:** Not regulated for transport.  
**UN Number:** Not regulated for transport.  
**Hazard Class:** Not regulated for transport.  
**Packing Group:** Not regulated for transport.

**TDG**

**Proper Shipping Name:** Not regulated for transport.  
**UN Number:** Not regulated for transport.  
**Hazard Class:** Not regulated for transport.  
**Packing Group:** Not regulated for transport.

**IMDG**

**Proper Shipping Name:** Not regulated for transport.  
**UN Number:** Not regulated for transport.  
**Hazard Class:** Not regulated for transport.  
**Packing Group:** Not regulated for transport.  
**Marine Pollutant:** Not regulated for transport.

**IATA**

**Proper Shipping Name:** Not regulated for transport.  
**UN Number:** Not regulated for transport.  
**Hazard Class:** Not regulated for transport.  
**Packing Group:** Not regulated for transport.

International Bulk Chemical Code: This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk

**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:** Yes  
**Chronic Health:** Yes



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 % of minimal 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.

**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).

**International Inventories**

**TSCA** Complies.  
**DSL/NDL** Complies.  
**EINECS/ELINCS** Contact supplier for inventory compliance status.  
**ENCS** Contact supplier for inventory compliance status.  
**IECSC** Contact supplier for inventory compliance status.  
**KECL** Contact supplier for inventory compliance status.  
**PICCS** Contact supplier for inventory compliance status.  
**AICS** Contact supplier for inventory compliance status.

**16. OTHER INFORMATION**

<b>NFPA</b>	Health hazards 0	Flammability 1	Instability 0	Physical and chemical properties -
<b>HMIS</b>	Health hazards 0	Flammability 1	Physical hazards 0	Personal protection X

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)  
 Ceiling Maximum limit value \* Skin designation

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)



Acute Exposure Guideline Level(s) (AEL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 RTECS (Registry of Toxic Effects of Chemical Substances)  
 World Health Organization

**Issuing Date** Oct 22, 2019  
**Revision date** Sept 1, 2016  
**Revision Note** No information available.

**Revision Note****Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**

<b>Data for Regulatory Rules</b>
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Region	Template name	Revision Note
Canada	HGHS	2.0

<b>GHS Product Information</b>
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Physical state	Liquid
Flash point °C	218 - 234
Boiling point / boiling range °C	246

**Component Information**

**Canada**

GHS

**Classification**

Not Hazardous

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS) Not a hazardous substance or mixture according to Canada's Hazardous Product Regulations.

Signal word

None

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

