SECTION 1: PRODUCT AND COMPANY INFORMATION

	24 HOUR EMERGENCY PHONE NUMBER
PRODUCT 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.
PRODUCT CODE:	Prefix 21
SYNONYMS:	Petroleum oil; Lube oil; Petroleum hydrocarbon; Lubricant.
PRODUCT NAME:	BOSS HIGH PERFORMANCE MOTOR OIL Includes grades 5w-20, 5w-30, 10w-30, 20w-50, SAE 30

This number is for emergency use only. If you desire non-emergency product information, please call a phone number listed below.

24 HOUR EMERGENCY PHONE NUMBER MEDICAL AND TRANSPORTATION (SPILL):

1-800-44-9457

SUPPLIER:

BOSS LUBRICANTS 112, 6303 – 30 STREET SE Calgary, AB T2C 164 Canada 403-279-2223 800-844-9457 www.bosslubricants.com

ISSUE DATE:

December 1, 2011

SECTION 2: HAZARDOUS INDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE Liquid, amber, petroleum odor.

CAUTION!

HEALTH HAZARDS May irritate eyes and skin. May be harmful if swallowed.

OSHA Regulated Chemicals No information is available.

POTENTIAL HEALTH EFFECTS

INHALATION: (BREATHING):	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 (SWALLOWING):	May be harmful if swallowed. May cause throat irritation, nausea, vomiting, and diarrhea.	
MEDICAL CONDITIO AGGRAVATED BY EX		
CHRONIC:	Prolonged or repeated inhalation of oil mist may cause pneumonia, lung tissue inflammation, and/or fibrous tissue formation. Prolonged or repeated eye contact my 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 know carcinogenicity. For more information, see SECTION11: CARCINOGENICITY.	

Also see SECTION 15: CALIFORNIA

POTENTIAL ENVIRONMENTAL EFFECTS

Not available. Also see SECTION 12: ECOLOGICAL INFORMATION.

SECTION 3: COMPSOTION/INFORMATION ON INGREDIENTS

AS#	Component	Synonym	Wt. Percent*
64742-58-1	Lubricating oils, petroleum	Hydrotreated	56-85
	hydrotreated spent	paraffinic base oil	
Trade Secret	Mineral oil	Trade Secret	0-35
64742-01-4	Residual oils (petroleum), solvent	Bright Stock	0-25
Mixture**	Base oil, mixture	Not available	0-25
64742-62-7	Residual oils (petroleum), solvent dewaxed	Bright Stock	0-25
72623-83-7	Lubricating oils, (petroleum), C>5, hydotreated bright stock	Bright Stock	0-25
72623-86-0	Neutral oil	Not Available	0-25
Trade Secret	Acrylic copolymer	Not Available	0-25
64742-54-7	Petroleum distillates, heavy paraffinic, C20-C50	Not Available	0-25
64742-55-8	Petroleum distillates, light paraffinic C15-C-30	Not Available	0-25
68649-42-3	Phosphorodithioc acid, O,0-di-C1-14- Alkyl esters, zinc salts.	Dialkyl (C1-C14) dithiophosphoric	0-6

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Oil Mist, mineral (8012-95-1).

*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.

**The base oil may be a mixture of the following CAS#'S 8042-47-5,64742-46-7, 64742-47-8, 64742-52-5, 64742-54-7, 72623-84-8, 72623-85-9, 72623-86-0, 72623-87-1, 178603-64-0, 178603-66-2, 17603-65-1, 445411-73-4.

Section 4: FIRST AID MEASURES

INHALATION (BREATHING):	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 form 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 product is 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.
INGESTION (SWALLOWING):	Do not induce vomiting. Immediately get medical attention. Call 1-800-844-9457 for additional information. If spontaneous vomiting occurs, keep the head below hips to avoid breathing the product into the lungs. Never give anything by mouth To an unconscious person.
NOTE TO PYSICIANS:	Treat symptomatically and supportively. Treatment may vary with the condition of victim and specifics of incident. Call 1-800-844-9457 for additional information.

SECTION 5: FIRE FIGHTING MEASURES

HAZARDOUS COMBUSTION PRODUCTS:	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.
CONDITIONS OF FLAMMABILITY:	Sparks, or flame. Product may burn, but does not ignite readily.
PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:	A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

EXTINGUISHING MEDIA:

Carbon dioxide, regular foam, dry chemical, water spray or water fog.

NFPA 704 HAZARD INDENTIFICATION: This information is intended solely for the use by individuals trained in this system.

HEALTH HAZARD	FIRE HAZARD
(BLUE)	(RED)



REACTIVITY (YELLOW)

SPECIFIC HAZARD (WHITE)

FIRE FIGHTING INSTRUCTIONS: Keep storage containers cool with water spray.

FIRE AND EXPLOSION HAZARDS:

Heated containers may rupture. "Empty" containers may contain 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 product. Stop leak if you can do it without Risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROL/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 alter disposal.

PERFORMANCE PEROFMANCE MOTOR OILS

SECTION 7: HANDLING AND STORAGE

HANDLING:	Keep away from sparks or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean tools. 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 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 Lubricating oils, petroleum, hydrotreated spent (64742-58-1)

ACGIH:	5mg/m3 TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
	10mg/m3 STEL (sampled by method that does not collect vapor) (related to Oil mist,
	mineral)
OSHA Final:	5mg.m3 TWA (related to Oil mist, mineral)
OSHA Vacated:	5mg/m3 TWA (related to Oil mist, mineral)
NIOSH:	5mg/m3 TWA (related to Oil mist, mineral)
	10mg/m3 STEL (related to Oil mist, mineral)

Mineral oil (Not Available)

ACGIH:	5mgm3 TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
	10mg/m3 STEL (sampled by method that does not collect vapor) (related to Oil mist,
	mineral)
OSHA Final:	5mg/m3 TWA (related to Oil mist, mineral)
OSHA Vacated:	5mg/m3 TWA (related to Oil mist, mineral)
NIOSH:	5mg/m3 TWA (related to Oil mist, mineral)
	10mg/m3 STEL (related to Oil mist, mineral)

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

ACGIH:	5mg/m3 TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
	10mg/m3 STEL (related to Oil mist, mineral)
OSHA:	5mg/m3 TWA (related to Oil mist, mineral)
NIOSH:	5mg/m3 TWA (related to Oil mist (mineral)
	10mg/m3 STEL (related to Oil mist (mineral)

Residual oils (petroleum), hydrotreated (64742-54-7)

ACGIH: 5mg/m3 TWA (sampled by method that does not collect vapor((related to Oil mist, mineral) 10mg/m3 STEL (related to Oil mist, mineral)

OCILA	$5 = (-2 \operatorname{TW}(A_{1}) + (-1) $
OSHA: NIOSH:	5mg/m3 TWA (related to Oil mist, mineral) 5mg/m3 TWA (related to Oil mist (mineral)
NIOSH:	10mg/m3 STEL (related to Oil mist (mineral)
	Tong/his STEE (related to On hist (hinteral)
Neutral oil (726	23-86-0)
ACGIH:	5mg/m3 TWA (sampled by method that does not collect vapor) (related to Oil mist,
	mineral)
	10mg/m3 STEL (related to Oil mist, mineral)
OSHA:	5mg/m3 TWA (related to Oil mist, mineral)
NIOSH:	5mg/m3 TWA (related to Oil mist (mineral)
	10mg/m3 STEL (related to Oil mist (mineral)
D 'I I 'I (
Residual oils (pe	etroleum), solvent dewaxed (64742-62-7)
AUGIN:	5mg/m3 TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
	10mg/m3 STEL (related to Oil mist, mineral)
OSHA:	5mg/m3 TWA (related to Oil mist, mineral)
NIOSH:	5mg/m3 TWA (related to Oil mist (mineral)
	10mg/m3 STEL (related to Oil mist (mineral)
ENGINEERING	Provide general ventilation needed to maintain concentration of vapor or mist below
CONTROLS:	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 PROTECT	TIVE EQUIPMENT
RESPIRATORY	Not normally needed. Use NIOSH-certified P- or R- series particulate filter
PROTECTION:	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
	Canada with CSA standard 274.4
EYE	Where eye contact is likely, wear chemical goggles; contact lens use is not
PROTECTION:	recommended.
SKIN	Where skin contact is likely, wear neoprene, nitrile or equivalent protective gloves: use
PROTECTION:	of natural rubber or equivalent gloves is recommended.
	When products are beated and skip contact is likely, wear beat insulating slower boots
	When products are heated and skin contact is likely, wear heat-insulating, gloves, boots, and other protective clothing.
	and other protective clothing.
	To avoid prolonged or repeated contact where spills and splashes are likely, wear
	appropriate chemical-resistant facesheild, boot, apron, coveralls, long sleeve shirts, or
	other protective clothing.
PERGONA	•• • • • • • • • • • • • • •
PERSONAL	Use good personal hygiene. Wash thoroughly with soap and water after handling
HYGIENE:	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.
	sutarated with these products.

OTHERWhere spills and splashes are likely, facilities storing or using these products shouldPROTECTIVEbe equipped with an emergency eyewash and shower, both equipped with clean waterEQUIPMENTin the immediate work area.

PHYSICAL STATE, APPEARANCE, AND ODOR:	Liquid, amber, petroleum odor.
ODOR THRESHOLD:	Not available
MOLECULAR WEIGHT:	Not applicable
SPECFIC GRAVITY:	0.88 (water=1) (approximately)
DENSITY:	703 LB/US gal (880 g/l) (approximately)
VAPOR DENSITY:	Not available
VAPOR PRESSURE:	less than 0.1 m Hg at 68°F (20°C)
BOILING POINT:	475°F (246°C) (minimum)
FREEZING/MELTING POINT:	Not available [pour point 0°F(-18°C) (maximum].
рН:	Not available.
EVAPORATION RATE:	Not available.
SOLUBILITY IN WATER:	Insoluble
FLASH POINT:	383°F (195°C) (minimum) Cleveland Open Cup
FLAMMABLE LIMITS IN AIR:	LOWER: Not available UPPER: Not available
AUTOIGNITION TEMPERATURE:	Not available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

SECTION 10: SATBILITY 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.

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

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

Residual oils (petroleum), hydrotreated (64742-54-7)

Inhalation LC50 RAT: 2.18 mg/L/4H Oral LD50 Rat: >2000 mg/kg Dermal LD50 Rabbit:>2000 mg/kg

Lubricating oils, (petroleum C15-30, hydrotreated neutral oil-based (72623-86-0 Inhalation LD50 rat: 2.18 mg/L/4H 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/4H Oral LD50 Rat:>5000 mg/kg Dermal LD50 50 Rabbit:>2000 mg/kg

Mineral oil (Not Available)

Oral ld50 Mouse 22 g/kg (related to Oil mist, mineral)

ACUTE EFFECTS:

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). May cause eye and skin irritation. Not likely to be absorbed through the skin in harmful amounts. May be harmful if swallowed . May cause throat irritation, nausea, vomiting, and diarrhea.

REPEATED DOSE EFFECTS:	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, and/or swelling 9dermatitis). Experimental evidence suggests that these products do not cause mutagenesis. .Based on best current information, there is no known sensitization, reproduce toxicity, or teratogenicity associated with these products.

CARCINOGENICITY: Based on best current information, there is no known carcinoigenicity as categorized by ACGIH A1 OR A2 substances; as categorized by IARC GROUP 1, Group 2A, or Group 2B agents; or as listed by NTP as either known as carcinogens or substances for which there is limited evidence of Carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals. Also see SECTION 15: CALIFORNIA.

TARGET ORGAN EFFECTS: Prolonged or repeated inhalation of oil mist may cause pneumonia, lung tissue inflammation, and/or fibrous tissue formation.

SECTION 12: ECOLO	OGICAL INFORMATION				
ECTOXICITY:	No information available for the product	No information available for the product.			
	Component Analysis-Ecotoxicity-Aquatic Toxicity				
	Lubricating oils, petroleum, hydrotrea	Lubricating oils, petroleum, hydrotreated spent (64742-58-1)			
	Test & Species	Results	Conditions		
	96 Hr LC50 Brachydanio rerio	79.6mg/L	semi-static		
	96 Hr LC50 Pimephales promelas	3.2mg/L	semi-static		
	Lubricating oils, petroleum, C20-50, h (72623-87-1)	ydrotreated neutral oil	-based		
	Test Species	Results	Conditions		
	96 Hr LC50 Oncorhyynchus mykiss	>5000mg/L			
	Residual oils (petroleum), solvent dewa	axed (64742-62-7)			
	Test Species	Results	Conditions		
	96 Hr LD50 Pimephales promelas	>5000mg/L			
	Lubricating oils, petroleum, C>25. hyd	lrotreated bright stock	(72623-83-7)		
	Test Species	Results	Conditions		
	96 Hr LC50 Leomis macrochirus	>1000mg/L			
Lubricating oils, petroleum, C15-30, hydrotre					
	Test Species	Results	Conditions		
	96 Hr LC50 Oncorhynchus mykill	>5000mg/L			
	Phosphorodithioc acid, O, O-di-C1-14	-alkyl esters, zinc salts	(68649-42-3)		
	Test Species	Results	Conditions		
	96 Hr LC 50 Pimephales promelas	1-5mg/L	static		
	Residual oils (petroleum), solvent refined (64742-01-4)				
	Test Species	Results	Conditions		
	96 Hr LC50 Onocorhynchus	>5000mg/L			
	Petroleum distillates, hydrotreated hea	avy paraffinic (64742-5	4-7		
	Test Species	Results	Conditions		
	96 Hr LC50 Pimephales promelas	>5000			

PERSISTANCE/ DEGRADABILITY:	No information available.
BIOACCUMULATION/ ACCUMULATION:	No information available.
MOBILITY IN ENVIRONMENTAL MEDIA:	No information available.
OTHER ADVERSE EFFECTS:	Not available.
OCTANOL/WATER PARTITION COEFFICIENT:	Not available.
VOLATILE ORGANIC	Negligible.

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL: dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste lies with the owner of the waste. Contact BOSS LUBRICANTS regarding proper recycling or disposal.

UEPA WASTE These products, if discarded, are not expected to be a characteristic or listed hazardous waste. If recycled in the USA, they must be managed in accordance with 40 CFR part 279. Processing, use, or contamination by the user may change the waster codes(s) applicable to the disposal of these products.

SECTION 14: TRANSPORT INFORMATION

DOT: Shipping Name: Not regulated

TDG: Shipping Name: Not regulated

EMERGENCY RESPONSE GUIDENot applicableNUMBER:Reference North American Emergency Response Guidebook

SECTION 15: REGULATORY INFORMATION

USA REGULATIONS

OSHAOSHA Regulated Chemicals
No information is available.SARA SECTION 302Based on the ingredient 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 311 312:	These products pose the following health hazard(s) as defined in 40 CFR Part 370 AND are subject to the requirements of Section 311 and 312 oft Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA): Immediate (Acute) Health Hazard Delayed (Chronic) Health Hazard
SARA SECTION 313:	These products contain "toxic"chemical(s) 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.
	Phosphorodithioc acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-4203) 1.0% de minimis concentration (Chemical Category N982) (related to Zinc compinds)
CERCLA:	Based on the ingredient(s) listed in SECTION 3, this product does not contain any "hazardous substances" listed pursuant to the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302 Table 302.4.
TSCA:	All the components of this product are listed on, or are exempted from the requirement to be listed on, the TSCA Inventory.
CALIFORNIA:	This product does not contain detectable amounts of any chemical known to the State of California to cause cancer.
	This product does not contain detectable amounts of any chemical known to the State of California to cause birth defects or other reproductive harm.

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 CPR.

CANADIANThe components of this product are listed on, or are exempted from the requirementsENVIRONMENTALto be listed on, the Canadian Domestic Substances List (DSL).PROTECTION ACTCEPA):

SECTION 16: OTHER INFORMATION

REVISION INFORMATION:	This MSDS has been revised in the following sections: Section 3 (Composition), Section 8 (Exposure Limits, Section 11 (Toxicology Fields), Section 12 (Component Ecotoxicity), Section 13 (Regulatory)< Section 16 (Revision)>
LABEL/OTHER INFORMATION:	Not available.

User assumes all risks incident to the use of this (these) product(s). 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 express or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the product(s) as supplied to the user.