

BOSS LUBRICANTS: MATERIAL SAFETY DATA SHEET

PRODUCT NAME: BOSS MULTIGARD PG
Heat Transfer Fluid Concentrate

Date Prepared: 01/01/2012

COMPANY IDENTIFICATION

Supplier: BOSS LUBRICANTS
112, 6303 – 30 STREET SE
Calgary, AB T2C 1R4
Telephone: 403-279-2223
Fax: 403-2792272
Toll Free: 800-844-9457

National Fire Protection Association

2	Health
1	Flammability
0	Reactivity
	Special



SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: BOSS MULTIGARD PG
Product Description: Propylene glycol based industrial coolant and/or heat transfer fluid
Chemical Name: Inhibited ethylene glycol, aqueous solution
Chemical Family: Mixture
Formula: Mixture
Synonyms: Heat transfer fluid, coolant
DOT Identification: Not regulated
DOT Shipping No.: Not regulated
Manufacturer: BOSS LUBRICANTS

SECTION 2: TYPICAL COMPOSITION

<u>Material</u>	<u>CAS No</u>	<u>% Wt</u>
Ethylene Glycol	107-21-1	95%
Proprietary inhibitors	Not applicable	<4%
Deionized Water	007732-18-5	Balance

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.122). In addition, other substances no “Hazardous” per this OSHA Standard may be listed. Where proprietary ingredients shows, the identity may be made available as provided in this standard.

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SECTION 3: HAZARDOUS IDENTIFICATION

Health: 2
Flammability: 1
Reactivity: 0
Special: 0

0 = minimal 1 = slight 2 = moderate 3 = serious 4 = severe

Route(s) of Entry

Inhalation: Yes
Skin: Yes
Ingestion: Yes
Eyes: Yes
Target Organs: Kidneys and Liver

Effects of Overexposure:

Inhalation (Acute): Vapors or mist, in excess of permissible concentrations, or in unusually high concentrations generated from spraying, heating the material or as from exposure in poorly ventilated areas or confined spaces, may cause irritation of the nose and throat, headache, nausea, and drowsiness. Prolonged or repeated exposure may result in the absorption of potentially harmful amounts of material.

Skin: Brief contact is not irritating. Prolonged contact, as with clothing wetted with material may cause defatting of skin or irritation, seen as local redness with possible mild discomfort. Other than the potential skin irritation effects noted above, acute (short term) adverse effects are not expected from brief skin contact.

Ingestion: Contains ethylene glycol and/or diethylene glycol, which are toxic when swallowed. A lethal dose for an adult is 1-2 ml per kilogram, or about 4 ounces (one-half cup). Symptoms include headache, weakness, confusion, dizziness, staggering, slurred speech, loss of concentration, faintness, nausea and vomiting, increased heart rate, decreased blood pressure, difficulty breathing and seeing, pulmonary edema, unconsciousness, convulsions, collapse and coma. Symptoms may be delayed. Decreased urine output and kidney failure may also occur. Severe poisoning may cause death. Aspiration may occur during swallowing or vomiting, resulting in lung damage.

Eyes: May cause minimal irritation, experienced as temporary discomfort.

Signs and Symptoms of Exposure:

Redness and/or stinging sensation in eyes or on skin. Minor eye or skin irritation may occur with some people. See above "Effects of Overexposure."

Medical conditions Generally Aggravated by

Long-Term exposure: Repeated overexposure may aggravate existing kidney disease.

Chronic Effects: Repeated ingestion may cause kidney damage.

Carcinogenicity

NTP: None known

IARC Monographs: None known

OSHA regulations: None known

ACGIH None known

HMIS
H # 1
F # 1
R # 0
PPE†
†Sec.8

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SECTION 4: FIRST AID MEASURES

Emergency and First Aid Procedures

Eye Contact:	Flush eyes with large amounts of water for 15 minutes. If irritation persists, get medical attention.
Skin Contact:	Wash off in flowing water or shower. Wash contaminated clothing before reuse.
Ingestion:	DO NOT induce vomiting immediately and GET IMMEDIATE MEDICAL ATTENTION. Never give anything by mouth to an unconscious person.
Inhalation:	Remove to fresh air. If breathing has stopped, start artificial respiration. Seek medical attention.

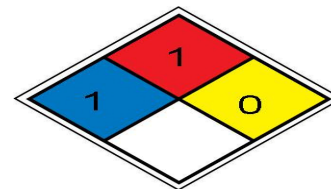
Note to Physicians: Treat symptomatically. No specific antidote. Supportive care. Treatment based on judgment of physician in response to reactions of the patient.

**Special Precautions/
Procedure.** None known

SECTION 5: FIRE-FIGHTING MEASURES

Flash Point: 215°F, 102°C close cap

NFPA



Flash Point Method: COC
Burning Rate: Not available
Autoignition Temperature: 371°C/700°F
Flammable limits in air (% by Volume) Lower 2.6% Upper 12.5%
LEL: Not available
UEL: Not available

Extinguishing Media: Water for, fog, foam, CO₂, dry chemical. Alcohol resistant foams (ATC type) are best when available. Do not use direct water stream as it may spread the fire.

Unusual Fire or Explosion Hazards: Closed containers may rupture or explode due to steam pressure build-up when exposed to extreme heat. Water may be used to cool closed containers. Do not use a direct water stream on fire. Container may rupture from gas generation in a fire situation.

Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.

Fire Fighting Equipment: Full protective equipment including positive-pressure, self-contained breathing apparatus. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Seek medical attention.

Unusual Fire Fighting Procedures: Keep people out of the area and isolate fire. Burning liquids may be moved by flushing with water. Do not use a direct water stream as it may spread fire.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill/Leak Procedures:	Recover useable material by convenient method; residual may be removed by wipe or wet mop.
Small Spills	Small spills should be absorbed with a suitable inert material (sand, earth, clay, etc.) Remove the absorbed material and place in an appropriate chemical waste container for disposal.
Large Spills:	Large spills should be diked and pumped.
Containment:	For large spills, dike far ahead of liquid spill for later disposal.
Regulatory Requirements:	If more than 10,539 pounds of product is spilled, then report spill according to SARA 304 and/or CERCLA 102(a) requirements, unless product qualifies for petroleum exemption (CERCLA Section 101 (14)).

SECTION 7: HANDLING AND STORAGE

Handling Procedures:	Wear impermeable gloves and other protective clothing to avoid prolonged or repeated skin contact. When handling, wear eye protection.
Storage Requirements:	Keep containers tightly closed when not in use. Store only in containers resistant to alkaline solutions with a pH of 9.0-12.0. Avoid temperatures above 450°F, 232°C. ETHYLENE GLYCOL BASE - Ethylene Glycol has produced birth defects in rodents. Do not store near food.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:	10mg/cubic meter for particulate mist; 50 ppm (125 mg/cubic meter) ceiling limit for Ethylene Glycol (ACGIH 1984-1985)
Ventilation:	Provide general or local exhaust ventilation systems. Normal to maintain exposure
Respiratory Protection:	If personal exposure cannot be controlled below applicable exposure limits by ventilation, wear respiratory devices approved by NIOSH/MSHA, for protection against organic vapors, dust, fumes and mists.
Protective Clothing/ Equipment:	Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles.
Work and Hygienic Practices:	Wash or rinse hands before touching eyes or contact lenses, and before eating.
Safety Stations:	Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.
Contaminated Equipment:	Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.
Comments:	Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet or applying cosmetics.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance and odor:	Dyed purple	odor less
Boiling point (760 mmHg):	370°F	188°C
Specific Gravity (water=1)	1.040 @20°C	68°F
Solubility in Water (%by wt):	Complete	
pH:	7.8, 8.3	
Vapor Density (air=1):	2.60-2.63	
Vapor Pressure:	2.2mmHg @ 68°F,	20°C

SECTION 10: STABILITY AND REACTIVITY

Stability:	Stable
Polymerization:	Does not usually occur.
Chemical Incompatibilities:	Oxidizing materials, strong acids
Conditions to avoid:	High temperatures above 413°C (775°F) (product can decompose)
Hazardous decomposition products:	Depends upon temperature, air supply and the presence of other materials

SECTION 11: TOXICOLOGICAL INFORMATION

Eye Effects:	Believed to cause eye irritation.
Skin Effects:	Can be irritating to skin upon prolonged contact..
Acute Inhalation Effects:	Drowsiness, narcosis, and unconsciousness possible upon exposure to high concentrations in poorly ventilated confined spaces.
Acute Oral Effects:	Central nervous system effects, kidney failure
Chronic Effects:	Liver and kidney damage in a 2 year rat feeding study using 1-2% Ethylene Glycol Oral administration of very high doses of Ethylene Glycol produced birth defects in laboratory animals.
Carcinogenicity:	None known
Mutagenicity:	Not mutagenic
Teratogenicity:	Not Teratogenic

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:	Oral: Believed to be 4.7-8.5 g/kg (rat); moderately toxic; inhalation: Not Determined; Dermal: Believed to be 1-3g/kg (rabbit); slightly toxic; Other : Not determined. Irritation Index/Estimation of Irritation (Species): Skin: Believed to be 0.5-1.8/8.0 (rabbit); slightly irritating Eyes: Believed to be 15-25/110 (rabbit); slightly irritating
Environmental Fate:	Decomposes to carbon, oxygen, nitrogen and water.
Environmental Degradation:	Biodegradable
Soil Absorption/Mobility:	Not determined

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SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal method;	Sanitary landfill or incinerate in approved facilities in accordance with local, state and federal regulations. Do not dump into any sewers, on the ground or into any body of water.
Disposal Regulatory Requirements:	This product, if unused, does not meet the RCRA criteria for being identified as a hazardous waste by characteristics.
Container Cleaning and Disposal:	Containers should be cleaned or residual product before disposal, and disposed of in accordance with all applicable laws and regulations.

SECTION 14: TRANSPORT INFORMATION

DOT Shipping Name:	Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol)
Shipping Symbols:	UN 3082
Hazard Class:	Class 9
DOT Identification No.:	Not regulated unless shipping container holds at least 10,000 pounds.
Packing Group:	III
Label:	Not applicable
Special Provisions (172.102):	Not applicable

Packaging Authorizations

a) Exceptions	Not applicable
b) Non-bulk Packaging:	Not applicable
c) Bulk Packaging:	Not applicable

Quantity Limitations

a) Passenger, Aircraft, or Railcar:	Not applicable
b) Cargo Aircraft Only:	Not applicable

Vessel Stowage Requirements

a) Vessel Stowage:	Not applicable
b) Other:	Not applicable

SECTION 15: REGULATORY INFORMATION

Regulatory Information: (Not meant to be all-inclusive -selected regulations represented.)	Notice: The information herein is presented in good faith and believed to be as accurate as the effective date shown above. However, no warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that its activities comply with federal, state or provincial and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.
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EPA Regulations

RCRA Hazardous Waste Number and RCRA

Hazardous Waste Classification: Unused product is not classified as a hazardous waste by RCRA criteria.

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(Regulatory information cont'd)

CERCLA Hazardous Substance and
CERCLA Reportable Quantity: Does not contain any ingredients listed as a CERCLA hazardous substance.

SARA313: Contains following substance which is listed in Title III:
Ethylene Glycol.

Regulatory Information cont'd

SARA Hazard Category: This product has been reviewed according to the EPA "Hazard Categories promulgated under Section 311 and 312 of the Superfund Amendment and Re-Authorization Act of 1986 (SARA Title III) and is considered, under applicable definitions not to have met any hazard category.

OSHA regulations: This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

WHMIS:
(The Canadian Workplace
Hazardous Materials Information
System) CANADIAN WHMIS CLASSIFICATION: Class D, Division,
Subdivision B (A toxic material causing other chronic effects)

SECTION 16 OTHER INFORMATION

Additional Hazard Rating Systems: None

Disclaimer: THE INFORMATION GIVEN HEREIN IS GIVEN IN GOOD FAITH AND FROM SOURCES WE BELIEVE RELIABLE. BUT NO WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS IS MADE.

The conditions or methods of handling, storage, use and disposal of this product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not apply.

CONSULT COMPANY LISTED IN SECTION 1 FOR FURTHER INFORMATION.

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