

BOSS LUBRICANTS: MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

EFFECTIVE DATE: January 1, 2012
PRODUCT: BOSS TLX
PRODUCT USE: DIESEL FUEL TREATMENT

MANUFACTURER
 BOSS LUBRICANTS
 112, 6303-30 STREET SE
 Calgary, AB CANADA
 T2C 1R4

TELEPHONE NUMBERS
 BOSS EMERGENCY NUMBER 1-800-844-9457
 CANUTEC 24 HOUR EMERGENCY 613-996-6666
 CANUTEC

This MSDS was prepared by the Toxicology and Material Safety Section of BOSS LUBRICANTS.

2. COMPOSITION/ INFORMATION on INGREDIENTS

Hazardous Ingredients

Comp	CAS No.	Percentage (by wt.)	Exposure Guidelines						Carcinogen
			OSHA		ACGIH		OTHER		
			TWA	STEL	TWA	STEL	TWA	STEL	
Petroleum Naphtha	64742-945	From 40 to 49.9 percent	N/E	N/E	N/E	N/E	100ppm (1)	N/E	N/E
Naphthalene	91 203	4.3%	10ppm	15ppm	10ppm	15ppm	N/E	N/E	IARC Suspect Carcinogen
Trimethylbenzene	25551-137	From 1 to 4.9 percent	25ppm	N/E	25ppm	N/E	N/E	N/E	N/E
C9 Aromatic Hydrocarbon	Confidential	From 0.5 to 1.5 percent	N/E	N/E	N/E	N/E	N/E	N/E	N/E
1,2,4- Tri-methylbenzene	95-63-6	From 0.1 to 0.9 percent	N/E	N/E	25ppm	N/E	N/E	N/E	N/E
Petroleum Distillate	----	40 to 49.9%	N/E	N/E	N/E	N/E	100ppm (1)	N/E	N/E

(s) – Skin exposure
 (p) - Proposed Limit
 (c) – Ceiling Exposure
 (l) – Recommended exposure limit
 (u) – Supplier recommended exposure limit
 (N/E) –None established
 Confidential – Withheld under an HMIRC Claim

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3. Hazards Identification

Principal Hazards

WARNING

- **HARMFUL IF INHALED.**
- **CAUSES EYE IRRITATION.**
- **CAUSES SKIN IRRITATION.**
- **COMBUSTIBLE LIQUID**
- **CONTAINS COMPONENTS WHICH MAY CAUSE CANCER.**
- **MAY CAUSE CHRONIC HEALTH EFFECTS.**

See Section 11 for complete health hazard information.

4. First Aid Measures

Ingestion	DO NOT INDUCE VOMITING. If conscious, give 1 glass of water. Get immediate medical attention. If vomiting occurs naturally, the casualty should lean forward to reduce the risk of aspiration.
Eyes	Flush immediately with water for at least 15 minutes. Get immediate medical attention.
Skin	Wash with soap and water. Immediately remove contaminated clothing. Get medical attention if irritation persists. Launder contaminated clothing before reuse and discard shoes and other leather articles saturated with the material.
Inhalation	Remove exposed person to fresh air if adverse effects are observed. If breathing is labored, administer oxygen. If breathing has stopped, apply artificial respiration.
Additional Information	Note to physician. Treat symptomatically.

5. Fire Fighting Measures

Flash Point	64 Deg C, 147.2 Deg F PMCC (Typical)
Extinguishing Media	CO2, dry chemical, or foam. Water can be used to cool and protect exposed material.
Firefighting Procedures	Recommend wearing self-contained breathing apparatus. Treat as an oil fire. Water may cause splattering.

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Unusual Fire & Explosion Hazards

Toxic fumes, gases or vapors may evolve on burning. Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back. Container may rupture on heating.

6. Accidental Release Measures

Spill Procedures

Evacuate all non-essential personnel. Personal Protective Equipment must be worn, see Personal Protection Section for PPE recommendations. Remove sources of ignition. Ventilate spill area. Prevent entry into sewers and waterways. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material. Check under Transportation and Labeling (DOT/CERCLA) and Other Regulatory Information Section (SARA) for hazardous substances to determine regulatory reporting requirements for spills.

7. Handling and Storage

Pumping Temperature

Not Available

Maximum Handling Temperature

45 Deg C, 113 Deg F

Handling Procedures

Keep away from potential sources of ignition. Open container in a well ventilated area. Avoid breathing vapors. Keep containers closed when not in use. Do not discharge into drains or the environment, dispose to an authorized waste collection point. Use appropriate containment to avoid environmental contamination. Wash thoroughly after handling. Empty containers retain material residue. Do not cut, weld, braze, solder, drill, grind or expose containers to heat, flame, spark or other sources of ignition.

Maximum Storage Temperature

45 Deg C, 113 Deg F

Handling Procedures

Keep away from potential sources of ignition. Open container in a well ventilated area. Avoid breathing vapors. Keep containers closed when not in use. Do not discharge into drains or the environment, dispose to an authorized waste collection point. Use appropriate containment to avoid environmental contamination. Wash thoroughly after handling. Empty containers retain material residue. Do not cut, weld, braze, solder, drill, grind or expose containers to heat, flame, spark or other sources of ignition.

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Maximum Storage Temperature	45 Deg C, 113 Deg F
Storage Procedures	Do not store near potential sources of ignition. Store in well ventilated area. Equip bulk storage tank with overfill protection such as high level alarms or secondary containment. Store drums in area with secondary containment. Storage area should be covered to prevent rain from entering.
Loading Temperature	45 Deg C, 113 Deg F

8. Exposure Controls/ Personal Protection

Other Exposure Limits	Contains mineral oil. Under conditions which may generate mists, observe the OSHA PEL of 5mg per cubic meter, ACGIH STEL of 10 mg per cubic meter.
Ventilation Procedures	Use local exhaust ventilation to control mists or vapors. Additional ventilation or exhaust may be required to maintain air concentrations below recommended exposure limits.
Gloves Procedures	Rubber. Nitrile. Polyvinyl alcohol. Note: polyvinyl alcohol gloves are water soluble and should not be used when there is potential for water contact.
Eye Protection	Safety glasses. If potential for splash or mist exists, wear chemical goggles or face shield.
Respiratory Protection	Use full face respirator with an organic vapor cartridge if the recommended exposure limit is exceeded. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites.
Clothing Recommendation	Long sleeve shirt is recommended. Wear either a chemical protective suit or apron when potential for contact with material exists. Don not wear rings, watches or similar apparel that could entrap the material and cause a skin reaction.

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9. Physical and Chemical Properties

Flash Point	64 Deg C, 147.2 Deg F PMCC (Typical)
Explosion Data	Material does not have explosive properties.
Vapor Pressure	Not available.
PH	Not available.
Specific Gravity	0.91 (15.6 Deg. C)
Water Solubility	Insoluble
Percent Volatile	Unknown
Evaporation Rate	Not available
Odor	Mild
Appearance	Dark brown liquid
Odor Threshold	Unknown
Boiling Point	Not available
Pour Point Temperature	< -40 Deg. C, -40 Deg F
Melting/ Freezing Point	Not available

10. Stability and Reactivity

Stability	Material is normally stable at moderately elevated temperature and pressures.
Decomposition Temperature	Not available.
Incompatibility	Strong alkalis. Reducing agents. Strong oxidizing agents.
Polymerization	Will not occur.

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Thermal Decomposition Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion. Under combustion conditions, oxides of the following elements will be formed: nitrogen.

11. Toxicology Information

-- ACUTE EXPOSURE--

Oral Toxicity	The LD50 in rats is > 5000 mg/kg. Based on data from components or similar materials. Swallowing material may cause irritation in the gastrointestinal lining, nausea, vomiting, diarrhea, and abdominal pain.
Eye Irritation	Moderate to strong eye irritation. Based on data from components or similar material.
Skin Irritation	Skin irritant. Based on data from components or similar materials. Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying and cracking of the skin.
Dermal Toxicity	The LD50 in rabbits is > 2000 mg/kg. Based on data from components or similar materials.
Inhalation Toxicity	High concentrations may cause headaches, dizziness, nausea, stupor and other central nervous system effects leading to visual impairment, difficulty breathing and convulsions.
Respiratory Irritation	If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract similar to that observed with mineral oil. Based on data from components or similar materials. Under good industrial hygiene practices where all exposure limits are observed, respiratory irritation should not be a problem. Exposure to a high concentration of vapor or mist is irritating to the respiratory tract. If fatty acids are over-heated, vapors or entrained mist may cause respiratory irritation.
Dermal Sensitization	May cause allergic skin reaction in susceptible individuals.
Inhalation Sensitization	No data available to indicate product or components may be respiratory sensitizers.

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-- CHRONIC EXPOSURE--

Chronic Toxicity	Repeated overexposure to petroleum naphtha can cause nervous system damage. Repeated overexposure to naphthalene may cause destruction of red blood cells with anemia, fever, jaundice and kidney and liver damage.
Carcinogenicity	A two-year National Toxicology Program (NTP) study found an increased incidence of tumors of the nose in rats exposed to naphthalene by inhalation. In mice similarly exposed increased incidences of alveolar/ bronchiolar adenomas were observed. Naphthalene has been classified by the International Agency for Research on Cancer (IARC) as a possible human carcinogen (Group 2B) on the basis of sufficient evidence of carcinogenicity in experimental animals but inadequate evidence in exposed humans.
Reproductive Toxicity	No data available to indicate either product or components present at greater than 0.1% that may cause reproductive toxicity.
Teratogenicity	No evidence of adverse effects were found in a developmental toxicity study of 2-ethylexanol in rats. Doses up to 3 ml/kg applied to the skin during the most critical part of the gestation period produced evidence of toxicity to mothers, but no evidence of injury in the developing offspring. In previous study, birth defects were observed by oral administration, an unlikely route of exposure in the workplace.
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Other	No other health hazards known.

12. Ecological Information

Freshwater Fish Toxicity	The acute LC50 is 1-10 mg/L based on component data.
Freshwater Invertebrates Toxicity	The acute EC50 is 1-10 mg/L based on component data.
Algal Inhibition	The acute EC50 1-10 mg/L based on component data.
Saltwater Fish Toxicity	Not available

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Saltwater Invertebrates Toxicity	Not available.
Bacteria Toxicity	Not available.
Miscellaneous Toxicity	Not available

13. Disposal Consideration

Waste Disposal	This material, if discarded, is a hazardous waste under RCRA Regulation 40 CFR 261.33. Waste Management should be in compliance with federal, provincial and local laws.
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14. Transport Information

Canada	All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
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15. Other Information

The information presented herein has been compiled from sources considered to be dependable and is accurate to the best of BOSS Lubricants knowledge; however, BOSS Lubricants makes no warranty whatsoever, expressed or implied of MERCHANTABILITY OR FITNESS FOR THE PARTICULAR PURPOSE, regarding the accuracy of such data or the results to be obtained from use thereof. Boss Lubricants assumes no responsibility for injury to recipient or to third persons or for any damage to any property and recipient assumes all such risks.