

MATERIAL SAFETY DATA SHEET

Abbreviations used on this Material Safety Data Sheet:

N/av. = Not available, N/req. = Not required, N/ap. = Not applicable, ppm = parts per million, TLV = Threshold Limit Value.

NFPA Hazard Rating: 4 - Extreme, 3 - High, 2 - Moderate, 1 - Slight, 0 - None, X - Blank

WHMIS HAZARD: D-2A

NFPA HAZARD RATING:

HEALTH - 1, FLAMMABILITY - 1, REACTIVITY - 0

SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER: Bi-Tron Penetrating Lubricant	
PRODUCT USE: Penetrant Metal Friction Wear Reducer	
RETAIL: Bi-Tron Marketing (NA) Ltd.	SUPPLIER'S NAME:
STREET ADDRESS: #100 12031 Horseshoe Way	STREET ADDRESS:
CITY: Richmond	PROVINCE: B.C.
POSTAL CODE: V7A 4V4	EMERGENCY TELEPHONE NUMBER: (USE ONLY FOR CHEMICAL EMERGENCIES) (613) 996-6666

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS NUMBER	LETHAL DOSE (50%) OF INGREDIENT (SPECIFY SPECIES AND ROUTE)	LETHAL CONCENTRATION (50%) OF INGREDIENT (SPECIFY SPECIES AND ROUTE)	PERMISSIBLE EXPOSURE LIMIT TLV-TWA
Heavy aromatic petroleum distillate	<5	64742-94-5	>4000 mg/kg (oral/rat)	N/av.	10 mg/m ³ for oil mists
Propane, as propellant	N/av.	74-98-6	N/av.	N/av.	N/av.
Isobutane, as propellant	N/av.	75-28-5	N/av.	52000ppm/2h (mouse, inhalation)	N/av.

SECTION 3 - PHYSICAL DATA

PHYSICAL STATE: Liquid	ODOUR AND APPEARANCE: Pale yellow liquid with an oily appearance, slight paraffinic odour		ODOUR THRESHOLD (ppm): N/av.
VAPOUR PRESSURE: (mm Hg) >1.0	VAPOUR DENSITY: (Air = 1) >1.0@20 °C	EVAPORATION RATE: Slower than ether @20 °C	BOILING POINT: 153 °C approx
FREEZING POINT: -28 °C	PERCENT VOLATILES: 30-35%	COEFFICIENT OF WATER/OIL DISTRIBUTION: Insoluble in water	
PH: N/ap.	SPECIFIC GRAVITY: (Water = 1) 1.09@21 °C		

SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY IF YES, UNDER WHICH CONDITIONS? YES X NO	Flammable when heated to ignition in contact with external ignition source. Will decompose if heated in excess of 126 °C.		
MEANS OF EXTINCTION: Smother with dry chemical powder, foam, carbon dioxide, or water fog.			
SPECIAL PROCEDURES: Fire fighters must wear self-contained breathing apparatus and protective clothing. Decontaminate clothing with water before removal.			
FLASHPOINT AND METHOD: 43 °C (liquid), -105 °C (propellant)	UPPER FLAMMABILITY LIMIT: (% BY VOLUME) 8.5%	LOWER FLAMMABILITY LIMIT: (% BY VOLUME) 1.0%	
AUTOIGNITION TEMPERATURE: > 400 °C	HAZARDOUS COMBUSTION PRODUCTS: Hydrogen, carbon and elemental carbon. Held at 175C for 4 hours this product may give off a maximum of 0.1% weight of hydrogen chloride.		
EXPLOSION DATA: SENSITIVITY TO IMPACT: None	SENSITIVITY TO STATIC DISCHARGE: None		

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY IF NO, UNDER WHICH CONDITIONS? YES X NO	Stable under normal conditions of use.
INCOMPATIBILITY WITH OTHER SUBSTANCES IF YES, WHICH ONES? YES X NO	Direct sources of heat and ignition. May react with alkali and alkaline earth metals. Strong oxidizing agents.
REACTIVITY, AND UNDER WHAT CONDITIONS? None, stable	
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide and carbon and traces of oxides of chlorine when heated in excess of 200 °C for prolonged periods.	
PRODUCT IDENTIFIER: Bi-Tron Penetrating Lubricant	

SECTION 6 - TOXICOLOGICAL PROPERTIES

<small>ROUTE OF ENTRY:</small>	<small>SKIN CONTACT</small> X	<small>SKIN ABSORPTION</small>	<small>EYE CONTACT</small> X	<small>INHALATION</small>	<small>INGESTION</small> X
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EFFECTS OF ACUTE EXPOSURE TO PRODUCT:
Inhalation of atomized spray may cause upper respiratory irritation such as coughing, resulting in sore throat. Health effects may include dizziness, light-headedness, headache, or possible unconsciousness. May cause skin irritation in those pre-disposed to skin problems. Contact with the eye may cause irritation, redness, tearing, or blurred vision. Ingestion may cause adverse health effects such as nausea, vomiting, or diarrhea. Aspiration into lungs may cause chemical pneumonitis, which may be fatal.

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT:
Prolonged exposure to this product is unlikely to cause sensitization. There is no data to indicate that this material is carcinogenic in humans. Although there are no studies on humans, animal studies have indicated that repeated high dosages orally may result in damage to the liver, kidneys and thyroid.

<small>EXPOSURE LIMITS:</small> No data	<small>IRRITANCY OF PRODUCT:</small> As above.	<small>SENSITIZATION TO PRODUCT:</small> Not reported.	<small>CARCINOGENICITY:</small> Not listed by IARC
<small>TERATOGENICITY:</small> No data	<small>REPRODUCTIVE TOXICITY:</small> No data	<small>MUTAGENICITY:</small> No data	<small>SYNERGISTIC PRODUCTS:</small> None known

SECTION 7 - PREVENTIVE MEASURES

<small>PERSONAL PROTECTIVE EQUIPMENT:</small>		
<small>GLOVES (SPECIFY):</small> If exposure is likely to be prolonged, use a barrier cream or wear nitrile rubber gloves.	<small>RESPIRATOR (SPECIFY):</small> None indicated under proper use.	<small>EYE (SPECIFY):</small> Safety goggles strongly recommended to avoid any irritation. Avoid use of contact lenses.
<small>FOOTWEAR (SPECIFY):</small> As dictated by the work place.	<small>CLOTHING (SPECIFY):</small> If exposure to skin is likely, wear suitable protective clothing to protect from skin contact.	<small>OTHER (SPECIFY):</small> Emergency eye-wash and safety shower strongly recommended in work area.

ENGINEERING CONTROLS (SPECIFY, VENTILATION, ENCLOSED PROCESS):
Use good ventilation in the work area.

LEAK AND SPILL PROCEDURE:
Eliminate all sources of ignition. Dam larger spills with sand or suitable absorbent. Place contaminated soil or absorbent in approved, compatible containers and label appropriately. Do not put liquid back into original container. Keep salvage containers tightly closed and away from heat or sources of ignition.

WASTE DISPOSAL:
Consult national, provincial, and local regulations.

HANDLING PROCEDURES AND EQUIPMENT:
Avoid any handling procedure that may cause contact with eyes, or prolonged contact with skin.

STORAGE REQUIREMENTS:
Store in a cool, dry, well-ventilated area in the original containers. Keep containers away from direct sunlight. Do not store near foodstuffs. Product will last in excess of 2 years if stored as recommended.

<small>SPECIAL SHIPPING INFORMATION:</small> Follow all WHMIS labelling requirements. Shipping description is: ROAD and AIR: Non Regulated in non bulk	<small>TG: UN NUMBER</small>
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SECTION 8 - FIRST AID MEASURES

SPECIFIC MEASURES:
EYE CONTACT: Flush with running water for at least 20 minutes, holding eyelids open. Get medical attention if irritation persists.
SKIN CONTACT: Remove contaminated clothing. Wash affected area with soap and water. Launder clothing before reusing. Get medical attention if irritation persists.
INHALATION: Remove victim to fresh air. Give artificial respiration if indicated. Get medical attention.
INGESTION: If patient is conscious, give three or four glasses of water. Do not induce vomiting. Do not give anything by mouth to a convulsing or unconscious person. Get medical attention.
GENERAL ADVICE: Good personal hygiene is essential. Avoid eating, smoking or drinking in work areas.

SECTION 9 - PREPARATION DATE OF MSDS

<small>PREPARED BY:</small> Kel-Ex Agencies Ltd. with information supplied by Bi-Tron Global and CCINFO database.	<small>PHONE NUMBER:</small> Kel-Ex Agencies Ltd. (604) 986-4617 Bi-Tron Global (604) 244-8999	<small>DATE:</small> February 25, 2007
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