



MATERIAL SAFETY DATA SHEET

LUBE-A-BOOM DRY FILM LUBRICANT (AEROSOL)

1. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME LUBE-A-BOOM DRY FILM LUBRICANT (AEROSOL)

PART No. 010106

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Date of last issue 2006-06-30

2. COMPOSITION AND INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS No.	WEIGHT
*ACETONE	67-64-1	30-50 %
*BUTANONE, 2- (COMMON NAME: METHYL ETHYL KETONE)	78-93-3	10-30 %
*PROPANOL, 2- (COMMON NAME: ISOPROPYL ALCOHOL)	67-63-0	5-15 %
*BUTANE	106-97-8	5-15 %
*PROPANE	74-98-6	5-15 %
*MOLYBDENUM SULFIDE (MoS ₂)	1317-33-5	1-3 %

* This chemical(s) is hazardous according to OSHA/WHIMIS criteria

COMPOSITION COMMENTS Refer to section eight for exposure limits on ingredients.
Chemical ingredients not regulated by OSHA or SARA are treated confidentially.

3. HAZARDS IDENTIFICATION

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EMERGENCY OVERVIEW

HEALTH HAZARDS, GENERAL Extremely flammable liquid or liquefied gas. Irritating to eyes. Harmful by inhalation.

SENSITIZATION Harmful by inhalation, in contact with skin, and if swallowed. Irritating to eyes.

CARCINOGENICITY No known information.

HEALTH WARNINGS IARC: Not listed as a Group 1, 2A, or 2B agent. NTP: Not listed. OSHA: Not regulated.

ROUTE OF ENTRY INHALATION. The solvent vapors can be harmful and cause headache, nausea and intoxication. Larger quantities can cause unconsciousness, breathing difficulty and heart failure. SKIN CONTACT. Irritating. Repeated or prolonged contact can result in drying of the skin. EYE CONTACT. Strongly irritating. INGESTION. Dangerous by ingestion.

ROUTE OF ENTRY Inhalation. Skin and/or eye contact. Ingestion. Skin absorption.

4. FIRST AID MEASURES

INHALATION Remove victim immediately from source of exposure. Move the exposed person to fresh air at once. For breathing difficulties oxygen may be necessary. If breathing stops, provide artificial respiration. Get medical attention.

EYES Rinse the eye with water immediately. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

SKIN Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.

INGESTION DO NOT INDUCE VOMITING! Get medical attention immediately!

5. FIRE FIGHTING MEASURES

FLASH POINT (°C) -104 (-156 F)

FLAMMABILITY LIMIT - LOWER(%) 1.8

FLAMMABILITY LIMIT - UPPER(%) 13

EXTINGUISHING MEDIA Use: Foam. Carbon dioxide (CO₂). Dry chemicals, sand, dolomite etc.

SPECIAL FIRE FIGHTING PROCEDURES Use water to keep fire exposed containers cool and disperse vapors. Water spray may be used to flush spills away from exposures and dilute spills to non-flammable mixtures. Avoid water in straight hose stream; will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control. Use special protective clothing. Regular protection may not be safe. Prevent inhalation of fumes and gases.

UNUSUAL FIRE & EXPLOSION HAZARDS Volume and pressure increases strongly when heated. Risk of container explosion in fire.

HAZARDOUS COMBUSTION PRODUCTS Acid smoke/fumes. Oxides of: Carbon. Sulfur.

PROTECTIVE MEASURES IN CASE OF FIRE Self-contained breathing equipment and chemical resistant clothing recommended.

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6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	Minimize skin contact. Avoid breathing vapors. Wear an appropriate respirator if exposure exceeds recommended guidelines. Remove sources of ignition.
PRECAUTIONS TO PROTECT THE ENVIRONMENT	Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas. Assure conformity with applicable government regulations.
SPILL CLEAN-UP PROCEDURES	Carefully collect spilled material in closed containers and leave for disposal according to local regulations. Provide good ventilation. Rinse area with water. Do not let washing down water contaminate ponds or waterways.

7. HANDLING AND STORAGE

HANDLING PRECAUTIONS	Avoid spilling, skin and eye contact. Keep away from heat, sparks and open flame. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Containers to be kept tightly closed. Eye wash and emergency shower must be available at the work place.
STORAGE PRECAUTIONS	Keep away from heat, sparks and open flame. Store separated from: Acids. Oxidizing materials. Store at temperature below 122°F.
STORAGE CRITERIA	Flammable compressed gas storage.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

COMPONENT	STD	TWA	STEL	TWA	STEL
ACETONE	OSHA	1000 ppm	N/E	2400 mg/m ³	
	ACGIH	500 ppm	750 ppm	1188 mg/m ³	1782 mg/m ³
	NIOSH	250 ppm	N/E		
BUTANONE, 2- (COMMON NAME: METHYL ETHYL KETONE)	OSHA	200 ppm		590 mg/m ³	
	ACGIH	200 ppm	300 ppm	590 mg/m ³	885 mg/m ³
	MAK	200 ppm (skin)			
PROPANOL, 2- (COMMON NAME: ISOPROPYL ALCOHOL)	OSHA	400 ppm	N/E	980 mg/m ³	N/E
	ACGIH	200 ppm **A4	400 ppm	492 mg/m ³	984 mg/m ³
	NIOSH	400 ppm	500 ppm		
BUTANE	OSHA	800 ppm			
	ACGIH	800 ppm			
PROPANE	OSHA	1000 ppm			
	ACGIH	1000 ppm	(C1-C4 Alkanes)		
MOLYBDENUM SULFIDE (MoS ₂)	OSHA		N/E		
	ACGIH	3 mg/m ³ (resp) as Mo		10 mg/m ³ (in) as Mo	

PROTECTIVE EQUIPMENT



ENGINEERING CONTROLS	Use engineering controls to reduce air contamination to permissible exposure level.
VENTILATION	No specific ventilation requirements noted, but forced ventilation may still be required if air contamination exceeds acceptable level.
RESPIRATORS	No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.
PROTECTIVE GLOVES	For prolonged or repeated skin contact use suitable protective gloves.
EYE PROTECTION	Wear splash-proof eye goggles to prevent any possibility of eye contact.
PROTECTIVE CLOTHING	Wear appropriate clothing to prevent repeated or prolonged skin contact.
HYGIENIC WORK PRACTICES	Wash at the end of each work shift and before eating, smoking and using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE	Aerosol.		
COLOR	Black.		
ODOR	Mild (or faint). Solvent.		
SOLUBILITY DESCRIPTION	Slightly soluble in water.		
BOILING POINT (°C, range)	-42 (-44 F) - 81 (177 F)	Pressure	760mmHg
DENSITY	0.73	Temperature (°C)	15.6 (60°F)
VAPOR DENSITY (air=1)	> 1		
pH-VALUE, CONC. SOLUTION	N/A		

10. STABILITY AND REACTIVITY

STABILITY	Normally stable.
CONDITIONS TO AVOID	Avoid contact with acids and oxidizing substances. Avoid heat, flames and other sources of ignition.
HAZARDOUS POLYMERIZATION	Will not polymerize.
HAZARDOUS DECOMPOSITION PRODUCTS	Oxides of: Carbon. Sulfur.

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION No experimental toxicological data on the preparation as such is available.

COMPONENT	ACETONE
TOXICOLOGICAL DATA	Irritating effects. WHMIS (Canada) Eye. D2B - R36
TOXIC DOSE - LD 50	5800 mg/kg (oral rat)
TOXIC DOSE - LD 50	20000 mg/kg (oral rat)
TOXIC DOSE - LD 50 SKIN	2400 mg/kg (skn rbt)
TOXIC CONC. - LC 50	120 mg/l (inh-rat)
COMPONENT	BUTANONE, 2- (COMMON NAME: METHYL ETHYL KETONE)
TOXICOLOGICAL DATA	Reproductive effects. WHMIS (Canada) D2A - R61
	Irritating effects. WHMIS (Canada) Eye. D2B - R36
TOXIC DOSE - LD 50	3400 mg/kg (oral rat)
TOXIC CONC. - LC 50	2000 mg/l/4h (inh-rat)
REPRODUCTION TOXICITY	Methyl ethyl ketone is embryotic and/or fetotoxic in animal. MEK detected in maternal milk in human. Embryo or Fetus: death inh-rat TCLo=1000ppm - Developmental Abnormalities: inh-rat TCLo=3000ppm/6H - Musculoskeletal abnormalities inh-rat TCLo= 1000ppm.
COMPONENT	PROPANOL, 2- (COMMON NAME: ISOPROPYL ALCOHOL)
TOXICOLOGICAL DATA	Irritating effects. WHMIS (Canada) D2B
TOXIC DOSE - LD 50	5840 mg/kg (oral rat)
TOXIC DOSE - LD 50 SKIN	12800 mg/kg (skn rbt)
TOXIC CONC. - LC 50	32000 ppm/4h (inh-rat)
CARCINOGENICITY	OSHA: Not regulated. NTP: Not listed. IARC-3 designation: Not classifiable as to Carcinogenicity to Humans.
COMPONENT	BUTANE
TOXIC DOSE - LD 50	No Information Available (NIA).
TOXIC CONC. - LC 50	680 mg/m3/2h (inh-mus)
COMPONENT	PROPANE
TOXIC DOSE - LD 50	1000 mg/kg (oral rat)
TOXIC DOSE - LD 50 SKIN	1800 mg/kg (skn rbt)
TOXIC CONC. - LC 50	No Information Available (NIA).

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION No data on possible environmental effects have been found.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS	Spilled material, unused contents and empty containers must be disposed of in accordance with local, state and federal regulations.
WASTE CLASSIFICATION	D001 Ignitable.

14. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME	Consumer commodity
DOT HAZARD CLASS	ORM-D (Other Regulated Material D).
LABEL FOR TRANSPORT	



TDGR SHIPPING NAME	Consumer Commodity - bien de consommation
TDGR CLASS	Not Regulated.
UN No. SEA	UN1950
IMDG CLASS	2
IMDG PACK GR.	N/A
SEA TRANSPORT NOTES	Aerosols
UN No., AIR	UN1950
ICAO CLASS	2.1
AIR PACK GR.	N/A
AIR TRANSPORT NOTES	Aerosols, flammable

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS			
COMPONENT	SARA 302	CERCLA	SARA 313
ACETONE	No	5 000 lbs	No
BUTANONE, 2- (COMMON NAME: METHYL ETHYL KETONE)	No	5 000 lbs	Yes
PROPANOL, 2- (COMMON NAME: ISOPROPYL ALCOHOL)	No	No	Yes
BUTANE	No	No	No
PROPANE	No	No	No
MOLYBDENUM SULFIDE (MoS2)	No	No	No
See Section 2 for Additional Information			

CLEAN AIR ACT	
COMPONENT	CAA Accidental Release Prevention
BUTANE	10 000 lbs
PROPANE	10 000 lbs

SARA HAZARD CATEGORIES

Acute Chronic Fire

COMPONENT	US STATE REGULATIONS							RI
	CA	MA	FL	MN	NJ	PA EH		
ACETONE								
BUTANONE, 2- (COMMON NAME: METHYL ETHYL KETONE)								
PROPANOL, 2- (COMMON NAME: ISOPROPYL ALCOHOL)	No		Yes		Yes	EH		
MOLYBDENUM SULFIDE (MoS2)					Yes			

STATE REGULATORY STATUS

CALIFORNIA PROPOSITION 65: This product ***DOES NOT*** contain chemicals considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 as causing cancer or reproductive toxicity, and for which warnings are now required.

PENNSYLVANIA RIGHT-TO-KNOW: This product contains the following chemicals that the state of Pennsylvania has identified as Special Hazardous Substances (SHS), Environmental Hazards (EH), or both (ESHS). The PA regulations require that the MSDS identify all SHS or EH chemicals by chemical name, common name, and CAS Number if they comprise 0.01% or more.

Propanol, 2-, Environmental Hazard, CAS# 67-63-0

2-Butanone, Environmental Hazard, CAS# 78-93-3

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM - WHMIS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

LABEL(S) FOR SUPPLY



CONTROLLED PRODUCT CLASSIFICATION

B5 - Flammable Aerosols
D2A - Chronic Very Toxic Material
D2B - Chronic Toxic Material

Risk phrases

R-12 Extremely flammable.
R-20 Harmful by inhalation.
R-36 Irritating to eyes.
R-61 May cause harm to the unborn child.

GLOBAL INVENTORIES

COMPONENT	CAN	US	EU	AUS	JAP	KOR	PHLP	CHN
PROPANOL, 2- (COMMON NAME: ISOPROPYL ALCOHOL)	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
BUTANE	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
PROPANE	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
MOLYBDENUM SULFIDE (MoS ₂)	DSL	Yes	EINECS	Yes	PRTR1	Yes	Yes	Yes
BUTANONE, 2- (COMMON NAME: METHYL ETHYL KETONE)	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
ACETONE	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes

CANADA CEPA: All components of this product comply with new substance notification requirements under the Canadian Environmental Protection Act (CEPA).

16. OTHER INFORMATION

NFPA-HMIS HAZARD RATING

HEALTH	Temporary incapacitation, injury (2) - HMIS/NFPA
FLAMMABILITY	Extremely flammable (4) - HMIS/NFPA
REACTIVITY	Unstable if heated (1) - HMIS/NFPA
PERSONAL PROTECTION INDEX	B - Safety Eyewear and Gloves
REVISION COMMENTS	Section 11: Toxicological Information Section 15: WHMIS
PREPARED BY	John Dingess
Replacement of MSDS generated	2003-11-11
DATE	2006-06-30
DISCLAIMER	While the information and recommendations set forth herein are believed to be accurate as of the date thereof, the company makes no warranty with respect thereto and disclaims all liability from reliance therein.
* Information revised since previous MSDS version	
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