

**MATERIAL SAFETY DATA SHEET**

**DENMAR BRINES  
BOTHWELL, ONTARIO  
(519) 695-3734**

**PRODUCT: Dust Fighter LO-CAL**

**SECTION I - COMPOSITION/INFORMATION OF INGREDIENTS**

INGREDIENT	WT. %	TLV	LD50	LC50	CAS #
Sodium Chloride	15-20 (w/v) 12-17 (w/w)	N/A	3,000 mg/kg	> 42 g/m3/1hr	7647-14-5
Calcium Chloride	8-10 (w/v) 6-9 (w/w)	N/A	1,000 mg/kg	N/A	10043-52-4
Magnesium Chloride	2-3 (w/v) 1.5-3 (w/w)	N/A	2,800 mg/kg	N/A	7786-30-3
Water	67-75 (w/v) 71-80.5 w/w	N/A	N/A	N/A	7732-18-5

**SECTION II - PREPARATION INFORMATION**

MSDS PREP.: .....LAMBTON SCIENTIFIC  
GROUP LEADER:.....CB JAMES  
TELEPHONE:.....(519) 344-4747  
DATE OF PREPARATION:.....March 2006

**SECTION III - PRODUCT INFORMATION**

PRODUCT:..... SALT SOLUTION  
PRODUCT USE:.....DE-ICING AGENT  
SHIPPING NAME:.....SALT SOLUTION  
CLASS AND DIVISION:.....N.D.G.  
U.N.#:.....N.D.G.  
PACKING GROUP:.....N.D.G.  
HEALTH:.....1  
FLAMMABILITY:.....  
0  
REACTIVITY:.....0

**SECTION IV - PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL STATE:.....LIQUID  
APPEARANCE, ODOUR:.. . HAZY LIGHT YELLOW COLOUR, TYPICAL ODOUR  
ODOUR THRESHOLD:.....NONE  
SPECIFIC GRAVITY (AT 25 DEG C):.....1.22  
VAPOUR PRESSURE (AT 25 DEG C):.....NOT AVAILABLE  
VAPOUR DENSITY (AIR = 1):.....NOT AVAILABLE

EVAPORATION RATE (ETHER = 1):.....NOT AVAILABLE  
BOILING POINT (AT 760 MM HG):..... 110°C  
pH (AT 25 DEG C):.....5.0 - 6.5  
COEFFICIENT OF WATER/OIL DISTRIBUTION:.....NOT AVAILABLE

**SECTION V - FIRE FIGHTING MEASURES**

CONDITIONS OF FLAMMABILITY:.....N/A  
MEANS OF EXTINCTION:.....N/A  
FLASH POINT (METHOD USED):.....N/A  
UPPER FLAMMABILITY LIMIT:.....N/A  
LOWER FLAMMABILITY LIMIT:.....N/A  
AUTOIGNITION TEMPERATURE:.....N/A  
HAZARDOUS COMBUSTION PRODUCTS:.....N/A  
EXPLOSION DATA - SENSITIVITY TO MECHANICAL:.....N/A  
EXPLOSION DATA - SENSITIVITY TO STATIC DISCHARGE:.....N/A

**SECTION VI - REACTIVITY DATA**

UNSTABLE CONDITIONS:.....STABLE  
INCOMPATIBILITY (MATERIAL TO AVOID):...COPPER AND COPPER ALLOYS  
CONDITIONS OF REACTIVITY:.....NONE  
HAZARDOUS DECOMPOSITION PRODUCTS:.....HYDROGEN CHLORIDE

**SECTION VII - TOXICOLOGICAL**

SKIN:.....PROLONGED CONTACT MAY CAUSE IRRITATION  
EYE:.....IRRITATION, MAY CAUSE BURNS  
INGESTION:.....GASTROINTESTINAL IRRITATION  
INHALATION:.....IRRITATION OF UPPER RESPIRATORY TRACT  
CHRONIC EFFECTS:.....NONE IDENTIFIED  
EXPOSURE LIMITS:.....NOT ESTABLISHED  
CARCINOGENICITY:.....NONE IDENTIFIED  
REPRODUCTIVE EFFECTS:.....NONE IDENTIFIED

**SECTION VIII - PREVENTATIVE MEASURES**

PERSONAL PROTECTIVE EQUIPMENT:.SAFETY GOGGLES, RUBBER GLOVES  
ARE RECOMMENDED  
VENTILATION:.USE ADEQUATE GENERAL OR LOCAL EXHAUST VENTILATION  
TO KEEP FUME LEVELS AS LOW AS POSSIBLE  
RESPIRATORY PROTECTION:.NONE REQUIRED WHERE ADEQUATE VENTILATION  
CONDITIONS EXIST  
LEAK OR SPILL:.FLUSH SPILL AREA WITH WATER  
STORAGE REQUIREMENTS:.KEEP CONTAINER TIGHTLY CLOSED. SUITABLE  
FOR ANY GENERAL CHEMICAL STORAGE AREA.  
THESE PRECAUTIONS ARE FOR ROOM TEMPERATURE HANDLING. USE AT  
ELEVATED TEMPERATURE MAY REQUIRE ADDED PRECAUTIONS.

WASTE DISPOSAL METHOD:.Technical Chemical Services Inc. SUGGESTS  
THAT ALL LOCAL, PROVINCIAL AND FEDERAL REGULATIONS CONCERNING

HEALTH AND POLLUTION BE REVIEWED TO DETERMINE APPROVED DISPOSAL PROCEDURES.

**SECTION IX - FIRST AID MEASURES**

**EYES:** .IN CASE OF EYE CONTACT, IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.

**SKIN:** .IN CASE OF CONTACT, FLUSH SKIN WITH WATER.

**INHALATION:** .IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.

**INGESTION:** .CALL A PHYSICIAN. IF SWALLOWED, GIVE LARGE AMOUNTS OF WATER. INDUCE VOMITING.

**THESE DATA ARE OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS A PRODUCT SPECIFICATION. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, IS HEREBY MADE. THE RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURE ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE APPROPRIATE.**

**NOTES:**

ACGIH = AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS

IARC = INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

NTP = NATIONAL TOXICOLOGY PROGRAM

OSHA = OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

TLV = THRESHOLD LIMIT VALUE (REGISTERED TO ACGIH)

CAS # = CHEMICAL ABSTRACT NUMBER

TDG = TRANSPORTATION OF DANGEROUS GOODS

WHMIS = WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

TWAEV = TIME WEIGHTED AVERAGE EXPOSURE VALUE (ONTARIO)

PMCC = PENSKY-MARTIN CLOSED CUP

**DATA SOURCES:**

- 1) CANADIAN CENTRE FOR OCCUPATIONAL HEALTH AND SAFETY, HAMILTON, ONTARIO
- 2) NATIONAL FIRE PROTECTION ASSOCIATION DATA
- 3) SUPPLIER MATERIAL SAFETY DATA SHEET
- 4) ONTARIO REGULATION 654/86 (AS AMENDED BY O REG. 707/86)
- 5) PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY
- 6) ACGIH - THRESHOLD LIMIT AND BIOLOGICAL EXPOSURE INDICES
- 7) TRANSPORTATION OF DANGEROUS GOODS ACT
- 8) WHMIS LEGISLATION - FEDERAL AND ONTARIO