

SECTION 1 - PRODUCT IDENTIFICATION	
Product identifier/Trade name:	Lice-X Liquid
Product code/Internal Identification:	PCP# 23777
Product use/Description:	Insecticide in HDPE container
Product chemical name:	N/Ap
Chemical family:	N/Ap
MSDS preparation/review date:	January 01, 2018
Supplier identifier:	Can-Vet Animal Health Supplies Ltd.
4-61 Malcolm Rd. Guelph, ON N1K1A7 519-822-5333	
Emergency phone number:	(613) 996-6666 (CANUTEC) 1-800 463-5060 OR (418) 656-8090 (CONTROL POISON CENTER)
Manufacturer identifier:	Same as supplier
Emergency phone number:	Same as supplier
WHMIS Classification:	Refer to Section 15.

SECTION 2 - CHEMICAL COMPOSITION / HAZARDOUS INGREDIENTS			
Hazardous Ingredients	CAS #	% (weight)	LD50 (route, specie)
Permethrin	52645-53-1	1.25	400 mg/kg (oral, rat)
Mineral Oil	72623-86-0	98.75	>50,000mg/kg (rat)

SECTION 3 - HAZARDS IDENTIFICATION	
<b>Emergency Overview</b>	
During a fire, irritating/toxic smoke and fumes may be generated. Mild central nervous system depressant. High vapour concentrations may cause headache, nausea, dizziness, drowsiness, incoordination, and confusion. May be irritating to the respiratory tract, eyes and skin. Aspiration hazard. Swallowing or vomiting of the product may result in aspiration into the lungs.	
<b>POTENTIAL HEALTH EFFECTS</b> (for more details, refer to Section 11)	
Primary entry route(s):	Skin, eye, ingestion and inhalation.
<b>Effects of short-term (acute) and long-term (chronic) exposure:</b>	
<b>Inhalation:</b>	May cause central nervous system (CNS) depression. May cause headache, nausea, dizziness, vomiting and incoordination. May be irritating to the respiratory tract.
<b>Skin:</b>	May cause a mild irritation. Long-term or repeated contact may result in dermatitis (dry, red, cracked skin).
<b>Eye:</b>	Product is a moderate eye irritant (redness and tearing).
<b>Ingestion:</b>	May cause gastrointestinal irritation, nausea, vomiting, and diarrhea. Aspiration hazard. Swallowing or vomiting of the liquid may cause aspiration (breathing) into the lungs.

**SECTION 4 - FIRST AID MEASURES****Inhalation:**

Remove source of contamination or have victim move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Obtain medical attention immediately.

**Skin contact:**

Flush contaminated area with lukewarm, gently running water for at least 5 minutes or until the chemical is removed. Under running water, remove contaminated clothing. If irritation persists, obtain medical advice. Completely decontaminate clothing before reuse or discard.

**Eye contact:**

Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes, or until the chemical is removed, while holding the eyelid(s) open. Obtain medical attention immediately.

**Ingestion:**

NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink two glasses of water. If vomiting occurs naturally, have victim

**SECTION 5 - FIRE FIGHTING MEASURES****Fire hazards/conditions of flammability:**

COMBUSTIBLE LIQUID. Can form explosive mixtures with air at temperature above flash point.

<b>Flash point (Method):</b>	160° C
------------------------------	--------

<b>Sensitivity to mechanical impact:</b>	Not sensitive.
--	----------------

**Sensitivity to static discharge:**

Product will accumulate static charge. Mixtures of vapour and air at concentrations in the flammable range may be ignited by a static discharge of sufficient energy.

<b>Auto-ignition temperature:</b>	229° C
-----------------------------------	--------

<b>Suitable extinguishing media:</b>	Carbon dioxide, dry chemical powder and appropriate foam.
--------------------------------------	---

**Special fire-fighting procedures/equipment:**

During a fire, irritating/toxic smoke and fumes may be generated. Vapours can accumulate in confined spaces, resulting in a toxicity and flammability hazard. A self-contained breathing apparatus is required for fire-fighting personnel to protect themselves from toxic products produced during the combustion. Closed containers may explode with the pressure building from the heat. Use water to cool fire exposed containers and prevent this situation.

**Hazardous combustion products:**

Carbon monoxide, carbon dioxide and other irritant gases, which may include toxic constituents.

<b>SECTION 6 - ACCIDENTAL RELEASE MEASURES</b>
<b>Personal precautions:</b>
Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. Remove all ignition sources. Remove or isolate flammable and combustible materials. Wear adequate personal protective equipment (See Section 8). Ventilate area.
<b>Spill response/Cleanup:</b>
Stop the flow if it can be done safely. Keep materials which can burn away from spilled material. Prevent material from entering waterways, sewers or confined spaces. SMALL SPILLS: Soak up spill with absorbent material which does not react with spilled chemical. Put material in suitable, covered, labelled containers. Flush area with water. LARGE SPILLS: Contain spill with earth, sand, or absorbent material which does not react with spilled material. Remove liquid by explosion-proof pumps or vacuum equipment. Place in suitable, covered, labelled containers. Contact fire and emergency services and supplier for advice. Contaminated absorbent material may pose the same hazards as the spilled product.
<b>Environmental precautions:</b>
For large spills, notify government occupational health and safety and environmental authorities. Confine spill, preventing it from entering sewer lines or waterways. Dispose of as per local, state and federal regulations.

<b>SECTION 7 - HANDLING AND STORAGE</b>
<b>Safe handling procedures:</b>
Before handling, it is very important that engineering controls are operating and that protective equipment requirements and personal hygiene measures are being followed. People working with this chemical should be properly trained regarding its hazards and its safe use. Do not use near welding operations, flames or hot surfaces. Ensure proper ventilation after sealed area has been treated. Inspect containers for leaks before handling. Label containers appropriately. Keep containers closed when not in use. Assume that empty containers contain residues which are hazardous. Do not use with incompatible materials such as strong oxidizing agents.
<b>Storage requirements:</b>
Store in a cool, well-ventilated area, out of direct sunlight and away from heat and ignition sources. Keep storage area clear of ignition sources. Store away from incompatible materials such as strong oxidizers. Inspect all incoming containers to make sure they are properly labelled and not damaged. Store in suitable, labelled containers. Keep containers tightly closed. Empty containers may contain hazardous residues. Keep absorbents for leaks and spills readily available. Storage facilities should be made of fire resistant materials. For large-scale storage, use a grounded, non-sparking ventilation system, approved explosion-proof equipment and intrinsically safe electrical systems. Storage area should be clearly identified, clear of obstruction and accessible only to trained personnel. Inspect periodically for damage or leaks. Have appropriate fire extinguishers and spill clean-up equipment in or near storage area.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION	
<b>Engineering controls:</b>	
Local exhaust ventilation system is recommended to maintain concentrations of contaminants below exposure limits.	
<b>Respiratory Protection:</b>	
Respiratory protection is required if the concentrations are higher than the exposure limits. Use a NIOSH approved respirator if the exposure limits are unknown.	
<b>Protective Clothing/Equipment:</b>	
Wear chemically protective gloves (impervious), boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective chemical safety goggles or in a splash environment in combination with a face shield. Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area. Separate contaminated work clothes from street clothes. Launder before reuse.	
<b>Comments:</b>	
Avoid contact with skin and eyes. Avoid breathing vapours	

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES			
<b>Physical state, colour and odour:</b>		Colorless liquid with no particular odor.	
<b>Odour threshold:</b>		N/Av	
<b>pH :</b>	N/Av	<b>Boiling point:</b>	N/A
<b>Melting/freezing point:</b>	N/Av	<b>Vapour pressure:</b>	N/A
<b>Coefficient of oil/water distribution:</b>	N/Av	<b>Solubility in water:</b>	Insoluble
<b>Specific gravity or density (water = 1, at 4 oC):</b>	0.87 g/mL	<b>Vapour density (Air = 1):</b>	(Heavier than air)
<b>Evaporation rate (n-Butyl acetate = 1):</b>	0.13 at 20° C	<b>% volatile by volume:</b>	N/Av

SECTION 10 - REACTIVITY AND STABILITY DATA	
<b>Stability and reactivity:</b>	Stable at room temperature, in normal handling and storage conditions.
<b>Polymerisation:</b>	Hazardous polymerisation will not occur.
<b>Conditions to avoid:</b>	Avoid STRONG OXIDIZING AGENTS, STRONG ACIDS, etc... Keep away from ignition sources.
<b>Materials to avoid:</b>	Avoid STRONG OXIDIZING AGENTS, STRONG ACIDS, ...
<b>Hazardous decomposition products:</b>	None reported.

SECTION 11 - TOXICOLOGICAL INFORMATION					
<b>Exposure limits:</b> N/Av for the product.					
Ingredient	OSHA PEL		ACGIH TLV		Other exposure limits
	TWA	STEL	TWA	STEL	
Mineral Oil	N/Av	N/Av	200 mg/m3	N/Av	N/Av
Permethrin	N/Av	N/Av	N/Av	N/Av	N/Av
<b>For more details, refer to Section 3.</b>					
<b>Carcinogenicity:</b>					
No ingredient listed by IARC, ACGIH, NTP or OSHA as a carcinogen.					
<b>Teratogenicity, mutagenicity, other reproductive effects:</b>			N/Av		
<b>Skin sensitization:</b>			N/Av		
<b>Respiratory tract sensitization:</b>			N/Av		
<b>Synergistic materials:</b>			N/Av		

SECTION 12 - ECOLOGICAL INFORMATION	
<b>Environmental effects:</b>	N/Av
<b>Important environmental characteristics:</b>	N/Av
<b>Aquatic toxicity:</b>	N/Av

SECTION 13 - WASTE DISPOSAL	
<b>Handling and storage conditions for disposal:</b>	
Store material for disposal as indicated in Handling and Storage (Section 7).	
<b>Methods of disposal:</b>	
Review federal, provincial and local government requirements prior to disposal. Disposal by controlled incineration or secure landfill may be acceptable.	

SECTION 14 - TRANSPORTATION INFORMATION	
<b>Transportation of Dangerous Goods (TDG) :</b>	
TDG Classification:	N/A
Special case:	

SECTION 15 - REGULATORY INFORMATION
-------------------------------------

<b>In Canada</b>
<b>WHMIS information:</b>
Product is regulated according to the Pest Control Act and is exempted from the Controlled Product Regulation (CPR) in Canada.
<b>Hazardous Materials Identification System (HMIS):</b>
HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0 PERSONAL PROTECTION: Section 8. HAZARD: 0 Minimal 1 Slight 2 Moderate 3 Serious 4 Severe
<b>National Fire Protection Association (NFPA):</b>
HEALTH: 1 FLAMMABILITY: 2 REACTIVITY: 0 PERSONAL PROTECTION: Section 8. HAZARD: 0 Minimal 1 Slight 2 Moderate 3 Serious 4 Severe

<b>SECTION 16 - OTHER INFORMATION</b>	
<b>Prepared by:</b>	Trevor Grant
<b>Telephone number:</b>	519-822-5333
<b>References:</b>	
1. Manufacturer'/suppliers' MSDS. 2. Documents provided by the «Répertoire toxicologique de la CSST». 3. Canadian Centre for Occupational Health and Safety, CHEMpendium/RTECS, 2009.	
<b>Abbreviations:</b>	
ACGIH	American Conference of Governmental Industrial Hygienists
C	Ceiling
CAS	Chemical Abstract Service
CFR	Code of Federal Regulations (Transportation in U.S.A.)
DOT	Department of Transport (U.S.A.)
DSL	Domestic Substance List
IARC	International Agency for Research on Cancer
LC	Lethal concentration
LD	Lethal Dosage
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program (U.S.A.)
OSHA	Occupational Safety and Health Administration (U.S.A.)
PEL	Permissible Exposure Limit
STEL	Short-term Exposure Limit
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
USEPA	United States Environmental Protection Agency
WHMIS	Workplace Hazardous Materials Information System