

MATERIAL SAFETY DATA SHEET – 16 Sections

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier #0111 Mosquito Sticks		[WHMIS Classification] Not Applicable	
Product Use Mosquito Repellent			
Manufacturer's Name		Supplier's Name Coghlan's Ltd.	
Street Address		Street Address 121 Irene Street	
City	Province	City Winnipeg	Province Manitoba
Postal Code	Emergency Telephone	Postal Code R3T 4C7	Emergency Telephone 1-877-264-4526
Date MSDS Prepared February 1, 2012	MSDS Prepared By		Phone Number (204) 284-9550

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients (specific)	%	CAS Number	LD ₅₀ of Ingredient (specify species and route)	LC ₅₀ of Ingredient (specify species)
d-cis trans Allethrin	.25%	584-79-2	2,150 & 900 mg/kg (Oral, male & female rat, respectively) 2,660 & 4,390 mg/kg (Dermal, male & female rabbit, respectively)	> 3,875 mg/m ³ (Inhalation – 4 Hr., rat)

SECTION 3 – HAZARDS IDENTIFICATION

Route of Entry	<input type="checkbox"/> Skin Contact	<input type="checkbox"/> Skin Absorption	<input type="checkbox"/> Eye Contact	<input checked="" type="checkbox"/> Inhalation	<input type="checkbox"/> Ingestion
[Emergency Overview] Avoid prolonged, direct inhalation of smoke. May cause respiratory irritation if inhaled when ignited. Contact with ignited product will burn skin.					
[WHMIS Symbols] Not applicable					
[Potential Health Effects] Prolonged exposure to ignited material through inhalation may cause headache and/or nausea.					

SECTION 4 – FIRST AID MEASURES

Skin Contact Wash hands thoroughly with soap and water after handling the product. Obtain medical attention if irritation occurs.
Eye Contact If irritation develops, flush eyes with clean water, holding eyelids apart for a minimum of 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Obtain medical attention if irritation persists
Inhalation Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is laboured, give oxygen. Obtain immediate medical attention.
Ingestion If swallowed, immediately contact a poison control centre, doctor or nearest hospital for treatment advice. Provided the patient is conscious, wash out mouth with water. Do not give anything by mouth to an unconscious person. Do not induce vomiting unless directed by a physician or a poison control center. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer water.
NOTES TO PHYSICIAN: There is no specific antidote. If a large amount has been swallowed and emesis has been inadequate, lavage stomach. Treat symptomatically.
MEDICAL CONDITIONS KNOWN TO BE AGGRAVATED: Individuals with allergic history or pre-existing dermatitis should use extra care in handling this product.

[Optional, not required under WHMIS]

SECTION 5 – FIRE FIGHTING MEASURES

Flammable <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, under which conditions? This product is ignited and allowed to smolder to release mosquito repelling fumes.	
Means of Extinction For individual units , submerge in water or cover with sand. For bulk shipments , use foam, carbon dioxide, dry powder, halon extinguishant or water fog or mist, (avoid use of water jet). Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. Contain run-off water with, for example, temporary earth barriers.		
Flashpoint (°C) and Method Approx. 65°C (TCC)	Upper Flammable Limit (% by volume) Not Applicable	Lower Flammable Limit (% by volume) Not Applicable
Autoignition Temperature (°C) Not Applicable	Explosion Data – Sensitivity to Impact No	Explosion Data – Sensitivity to Static Discharge No
Hazardous Combustion Products During a fire involving bulk materials, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.		
[NFPA] Not applicable.		

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedures For Bulk Material Spills ONLY: Personal Precautions: Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. A small spill can be handled routinely. Wear suitable protective clothing and eye protection to prevent skin and eye contact. Use adequate ventilation and wear an air-supplied respirator to prevent inhalation. Procedures for dealing with release or spill: Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Sections 7 and 8. Scoop or sweep up material, keeping dust to a minimum, and place into a disposable container. Wash area with detergent and water. Pick up wash liquid with additional absorbent and place into compatible disposal container. On soils, skim off the upper contaminated layer and collect for disposal. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.
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SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment KEEP OUT OF REACH OF CHILDREN and animals. Wash hands thoroughly with soap and water after handling, and before eating, tobacco use, drinking, or using the toilet. Keep containers closed when not in use.
Storage Requirements Store in original container only in a well-ventilated, cool, dry, secure area. Protect from heat, sparks and flame. Keep separate from other products and food. Clean up spilled material immediately.

SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits <input type="checkbox"/> ACGIH TLV <input type="checkbox"/> OSHA PEL <input type="checkbox"/> Other (specify)
Specific Engineering Controls (such as ventilation, enclosed process) This product is intended for use outdoors where engineering controls are not necessary. If necessary, ensure work areas have ventilation, containment, and procedures sufficient to maintain airborne levels below the TLV. Avoid breathing dust, vapours or smoke/fumes. Avoid contact with eye. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.
EYES: Where eye contact is likely, wear chemical goggles or a full-face shield. SKIN: Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves. INHALATION: A respirator is not normally required when handling this substance. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits. A NIOSH-certified combination air-purifying respirator with an N, P or R 95 or HE class filter and an organic vapour cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.
Personal Protective Equipment <input type="checkbox"/> Gloves <input type="checkbox"/> Respirator <input type="checkbox"/> Eye <input type="checkbox"/> Footwear <input type="checkbox"/> Clothing <input type="checkbox"/> Other

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State Solid	Odour and Appearance Woody, green coils and/or sticks	Odour Threshold (ppm) Not Applicable.
Specific Gravity 19.3 – 22.6 lbs/ft. ³	Vapour Density (air=1) 1.009 g/mL @ 20 °C (d-cis trans Allethrin Technical)	Vapour Pressure (mmHg) 0.17 mPa @ 21.6 °C (d-cis trans Allethrin Technical)
Evaporation Rate Not Applicable.	Boiling Point (°C) Not Applicable.	Freezing Point (°C) Not Applicable.
pH Not Applicable.	Coefficient of Water/Oil Distribution Log Pow = 4.95 (d-cis trans Allethrin Technical)	[Solubility in Water] 5 mg/L @ 25 °C (d-cis trans Allethrin Technical)

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If no, under which conditions?
Incompatibility with Other Substances <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, which ones?
Reactivity, and under what conditions? None Known	
Hazardous Decomposition Products During a fire involving bulk materials, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.	

SECTION 11– TOXICOLOGICAL INFORMATION

Effects of Acute Exposure Prolonged exposure through inhalation may cause headache and/or nausea.	
Acute toxicity/Irritation Studies (Finished Product):	
Ingestion:	<u>Practically Non-Toxic</u> Oral (LD50 Rat): > 5,250 mg/kg body weight
Dermal:	<u>Practically Non-Toxic</u> Dermal (LD50 Rat): > 4,200 mg/kg body weight
Inhalation:	<u>Practically Non-Toxic</u> Inhalation (LC50 Rat): > 4.766 g/m ³ 4 hr.
The acute toxicity test results reported in Section 11, above, for the finished product take into account any acute hazards related to the “other components” in the formulation.	
Effects of Chronic Exposure Prolonged exposure to ignited material through inhalation may cause headache and/or nausea.	
Irritancy of Product None Known	
Skin Sensitization None Known	Respiratory Sensitization None Known
Carcinogenicity – IARC d-cis trans Allethrin Technical: Not carcinogenic in the rat or mouse (2-year feeding bioassay)	Carcinogenicity – ACGIH Not Applicable.
Reproductive Toxicity d-cis trans Allethrin Technical: NOEL (No Observable Effect Level): Dietary = 6,000 ppm (rat, reproduction) = 200 ppm (rat, parent and fetus)	Teratogenicity
Embryotoxicity d-cis trans Allethrin Technical: NOEL (No Observable Effect Level): 100 mg/kg/day (rat)	Mutagenicity d-cis trans Allethrin Technical: Negative in Ames test, <i>in vitro</i> Chromosomal aberration test in mammalian cells, Unscheduled DNA synthesis in mammalian cells.
Name of Synergistic Products/Effects None Known.	

SECTION 12 – ECOLOGICAL INFORMATION

[Aquatic Toxicity]

Eco-Acute Toxicity**d-cis trans Allethrin Technical:**

Bees LC ₅₀ /EC ₅₀	“Toxic”
Invertebrates (<i>Daphnia pulex</i>) 48-hour LC ₅₀ /EC ₅₀	0.021 mg/L
Fish (<i>Cyprinus carpio</i>) 96-hour LC ₅₀ /EC ₅₀	0.134 mg/L

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal

Do not reuse empty containers. Dispose of empty containers in accordance with local regulations and label directions. Consult provincial environment ministry for advice on waste disposal. Industrial/commercial waste may be handled at licensed facilities only. Waste shipments must be securely packaged and properly labelled.

SECTION 14 – TRANSPORT INFORMATION

Special Shipping Information

TRANSPORTATION OF DANGEROUS GOODS CLASSIFICATION - ROAD/RAIL
Not Regulated.

IATA CLASSIFICATION - AIR
Not Regulated.

SECTION 15 – REGULATORY INFORMATION

[WHMIS Classification]

Not Applicable

[OSHA]

[SERA]

[TSCA]

Other regulations; restrictions and prohibitions

Pest Control Products (PCP) Act Registration No.: XXXXX

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

SECTION 16 – OTHER INFORMATION

The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and the issuer will not be liable for any damages, losses, injuries or consequential damages which may result from the use of or reliance on any information contained herein. This product is under the jurisdiction of the Pest Control Products Act and is exempt from the requirements for a WHMIS compliant MSDS. Hazardous properties of all ingredients have been considered in the preparation of this MSDS. Read the entire MSDS for the complete hazard evaluation of this product.

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