

# MATERIAL SAFETY DATA SHEET

## SUTERRA LLC

20950 NE Talus Place, Bend, Oregon USA 97701  
EMERGENCY PHONE NUMBER: (541) 388-3688

SECTION I			
TRADE NAME:	<b>Magnet OL Attract &amp; Kill (A&amp;K) Target Device for Ornamental Olives</b>		
SYNONYMS:	None		
REGULATORY LICENSE:	EPA Registration No. 56336-53		
CHEMICAL FAMILY:	Not applicable. The product consists of plastic laminated, die cut cardboard device coated with small amount of insecticide and incorporating two individual dispensers containing insect attractant components.		
SECTION II - COMPONENTS			
PRINCIPAL COMPONENT(S)	CAS NO.	CHEMICAL FORMULA	
Lambda cyhalothrin	91465-08-6	$C_{23}H_{19}ClF_3NO_3$	
1,7-Dioxaspiro (5,5) undecane (Spiroketal)	180-84-7	$C_9H_{16}O_2$	
Ammonium hydrogen carbonate (Ammonium bicarbonate)	1066-33-7	$CH_5NO_3$	
SECTION III - PHYSICAL DATA			
<b>BOILING POINT (°C)</b>	Not applicable for formulation, cardboard device. 212°F for Lambda cyhalothrin. 193°C @ 750 mm Hg for Spiroketal.	<b>BULK DENSITY</b>	Not applicable for formulation, cardboard device.
<b>VAPOR PRESSURE (mm Hg)</b>	Not applicable for formulation, cardboard device. $1.5 \times 10^{-9}$ mm Hg @ 68°F for Lambda cyhalothrin.	<b>VAPOR DENSITY (AIR = 1)</b>	Not applicable for formulation, cardboard device. 2.7 for Ammonium bicarbonate
<b>SOLUBILITY IN WATER</b>	Not applicable for formulation, cardboard device. 0.004 mg/l for Lamda cyhalothrin. 2.0 g/100ml for Spiroketal.	<b>MOLECULAR WEIGHT</b>	Not applicable for formulation, cardboard device.
<b>SPECIFIC GRAVITY (H<sub>2</sub>O = 1)</b>	Not applicable for formulation, cardboard device 1.04 @ 68°F for Lambda cyhalothrin. 1.02 for Spiroketal.	<b>APPEARANCE AND ODOR</b>	Solid cardboard device. Opaque to colorless when applied for Lambda cyhalothrin. Extruded purple polymer with minty odor for Spiroketal White polymeric tablet for Ammonium bicarbonate.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT (Method Used)	FLAMMABLE LIMITS (% by Volume in Air)	LEL	UEL
Not applicable for formulation, cardboard device. > 212°C (Setaflash) for Lambda cyhalothrin. 63°C (Closed cup) for Spiroketal	Not applicable for formulation, cardboard device.	Not applicable for formulation, cardboard device.	Not applicable for formulation, cardboard device.
EXTINGUISHING MEDIA: In case of fire, use water, CO2 or dry powder.			
SPECIAL FIRE FIGHTING PROCEDURES: Wear self contained breathing apparatus and protective clothing.			
UNUSUAL FIRE AND EXPLOSION HAZARDS: During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.			
SECTION V – HEALTH HAZARD DATA			
TOXICITY DATA			
<p>The toxicity of the product is determined by the toxicity of the three active ingredient components that it contains.</p> <p>For Lambda Cyhalothrin: LD<sub>50</sub>, Oral, Rat: &gt; 5,000 mg/kg; LD<sub>50</sub>, Dermal, Rat: &gt; 2,000 mg/kg;  LC<sub>50</sub>, Inhalation, Rat: &gt; 4.62 mg/L air – 4 hours; Eye Contact: Non-Irritating (Rabbit);  Skin Contact: Practically Non-Irritating (Rabbit);  Skin Sensitization: A weak skin sensitizer in animal tests  Reproductive/Developmental Effects: Not a developmental or reproductive toxicant.  Chronic/Subchronic Toxicity Studies: Reversible paresthesia (abnormal skin sensation)  Carcinogenicity: No treatment-related tumors in rats or mice  Other Toxicity Information: In humans, contact with exposed skin may result in temporary itching, tingling, burning or numbness, called paresthesia. The symptoms normally disappear within 24 hours.</p> <p>For Spiroketal: LD<sub>50</sub>, Oral, Rat: 500-5,000 mg/kg; LD<sub>50</sub>, Dermal, Rat: &gt; 5,000 mg/kg  To the best of our knowledge, the toxicological properties of this material have not been comprehensively investigated.</p> <p>For Ammonium Bicarbonate: Acute Effects: May be harmful by inhalation, ingestion, or skin absorption. Causes eye and skin irritation. Material is irritating to mucous membranes and upper respiratory tract.</p>			
EFFECTS OF OVEREXPOSURE			
EYE CONTACT:	May cause eye irritation.		
SKIN CONTACT:	May cause skin irritation. Lambda cyhalothrin may cause sensitization by skin contact and temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.		
INHALATION:	Not a likely route of exposure due to product form, a cardboard device. May be irritating to upper respiratory tract and mucous membranes. Exposure to high vapor levels of Lambda cyhalothrin may cause headache, dizziness, numbness, nausea, incoordination, or other central nervous system effects.		
INGESTION:	Not a likely route of exposure due to product form, a cardboard device. Lambda cyhalothrin is classified as practically non-toxic by ingestion.		
CHRONIC:	Due to product form, a cardboard device, significant long-term exposure is unlikely. For Lambda cyhalothrin reversible paresthesia (abnormal skin sensation) and reversible neurotoxicity in mammals. No other chronic effects expected from formulation or active ingredient components.		

**EMERGENCY AND FIRST AID PROCEDURES**

EYE CONTACT:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. If irritation develops, call a physician.
SKIN CONTACT:	Rinse skin immediately with plenty of water for 15-20 minutes. Wash with soap and water. If irritation develops, call a physician.
INHALATION:	Not a likely route of exposure due to product form, a cardboard device. However, if adverse effects are felt, remove victim to fresh air, give CPR if not breathing. If symptoms persist get medical attention.
INGESTION:	Not a likely route of exposure due to product form, a cardboard device. If swallowed, wash out mouth with water provided person is conscious. Do not induce vomiting unless told to do so by a Poison Control Center or doctor. Seek medical advice.

RECOMMENDED EXPOSURE LIMITS:	Not established for end-use product, Spiroketal or Ammonium bicarbonate. For Ammonia Gas: 25 ppm (17 mg m <sup>-3</sup> ) 8 hour TWA; 35 ppm (24 mg m <sup>-3</sup> ) 15 minute The manufacturer of Lambda cyhalothrin operates their facility such that employee exposure to that material is kept below 0.04 mg/m <sup>3</sup> as an 8 hour TWA (skin)
LISTED AS CARCINOGEN BY NTP, IARC, OR OSHA:	No.
OTHER HEALTH EFFECTS:	No known adverse effects expected.
HEALTH HAZARD CATEGORIES:	EPA Toxicity Category: III - CAUTION.

**SECTION VI - REACTIVITY DATA**

STABILITY:	Stable under normal temperature and pressure conditions. Ammonia dispensers decompose slowly to ammonia, carbon dioxide and water vapor if not kept in closed packaging.
INCOMPATIBILITY:	Strong oxidizing agents, acids and bases.
HAZARDOUS DECOMPOSITION PRODUCTS:	Ammonia, carbon oxides and water vapor.
HAZARDOUS POLYMERIZATION:	Will not occur.

**SECTION VII - SPILL OR LEAK PROCEDURE**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:	Large spills can be swept up. Protect from ignition. Keep out of water sources and sewers. Wear suitable gloves when handling the devices. Wash hands thoroughly after handling.
ENVIRONMENTAL HAZARDS/ WASTE DISPOSAL:	Wrap device in newspaper and discard in trash or at an approved disposal facility. Dispose at an approved waste disposal facility in accordance with local, state and federal regulations.

**SECTION VIII - SPECIAL PROTECTION INFORMATION**

RESPIRATORY PROTECTION: None required under normal use conditions. In case of insufficient ventilation, wear suitable respiratory equipment.

PROTECTIVE GLOVES: Prevent skin contact. Wear gloves when handling the devices.

EYE PROTECTION: None required under normal use conditions.

OTHER PROTECTIVE EQUIPMENT: Wear appropriate protective clothing.

VENTILATION: None required under normal use conditions. In case of insufficient ventilation, wear suitable respiratory equipment.

**SECTION IX - SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE, ETC.

Do not contaminate water, food, or feed. Store in cool, dry area away from heat or open flame.

**SECTION X - REGULATORY INFORMATION**

Irritating to eyes, respiratory system and skin. As of the preparation date, this product did not contain a chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

While this information and recommendations set forth are believed to be accurate as of the date hereof, Suterra LLC makes no warranty with respect hereto and disclaims all liability from reliance thereon.

Date: 09/27/2010

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