

# SAFETY DATA SHEET



## SILO<sup>®</sup> SMOKE

Date of Issue: 3 January 2018

### 1. SUBSTANCE/PREPARATION AND COMPANY IDENTIFICATION

<b>Chemical name of active ingredient(s):</b>	<b>Permethrin (25:75) 135 g/kg and potassium chlorate 127 g/kg.</b>
<b>Recommended use:</b>	<b>Smoke generator insecticide</b>
<b>Supplier:</b>	<b>Etec Crop Solutions Ltd PO Box 51584 Pakuranga 2140 Auckland</b>
<b>Emergency telephone number:</b>	<b>0800 Poison (0800 764 766) 24 Hours</b>

### 2. HAZARDS IDENTIFICATION

<b>Hazard Classification:</b>	5.1.1C, 6.1D, 6.3B, 6.4A, 6.5A, 6.9B, 9.1A, 9.3C, 9.4A
<b>Required identification Details:</b>	May intensify fire; oxidizer. May be harmful if swallowed. May cause eye and mild skin irritation. May cause respiratory sensitisation. May cause neurological symptoms from oral exposure at high doses. Very toxic to aquatic organisms. Harmful to terrestrial vertebrates. Very toxic to terrestrial invertebrates.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance/preparation Information on hazardous ingredients

Common name	CAS No	%
Potassium perchlorate	3811-04-9	12.7
Permethrin	52645-53-1	13.5
Other ingredients	(non-hazardous)	balance

### 4. FIRST-AID MEASURES

#### Description of necessary first aid measures:

#### Effects and symptoms

#### First-aid measures

<b>Inhalation:</b>	Move person to fresh air. Aid in breathing, if necessary, and get immediate medical attention.
<b>Ingestion:</b>	If swallowed rinse mouth with water and give water to drink.

<b>Skin contact:</b>	Immediately contact a doctor or the National Poisons Centre (0800 764 766) If skin contact occurs, remove contaminated clothing and wash with soap and water. If irritation occurs seek medical attention.
<b>Eye contact:</b>	In case of contact, immediately flush eyes with copious quantities of water for at least 15 minutes. Seek medical advice.
<b>Notes to a physician:</b>	
<b>Workplace facilities:</b>	Ensure washing facilities are available.
<b>Required Instructions:</b>	

## 5. FIRE-FIGHTING MEASURES

<b>HAZCHEM Code:</b>	
<b>Extinguishing media :</b>	Water fog, foam or dry agent.
<b>Hazardous thermal (de)composition products:</b>	During a fire this product may release smoke, hazardous decomposition product and toxic fumes.
<b>Protection of fire-fighters:</b>	Wear self-contained breathing apparatus and structural fire fighter's uniform.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	Wear suitable protective clothing and boots.
<b>Environmental precautions:</b>	Prevent spill from entering drains, sewers or any body of water.
<b>Methods for cleaning up:</b>	Contain and absorb with sand, earth or inert absorbent. Scoop or shovel into sealable containers for disposal in accordance with local and national regulations. Decontaminate area with soap and water. Rinse.

## 7. HANDLING AND STORAGE

<b>Handling:</b>	Avoid contact with skin and eyes. Avoid breathing vapour/mist. Use with adequate ventilation.
<b>Storage:</b>	Store in a cool dry well-ventilated area out of direct sunlight. Store in a locked room away from children, unauthorised persons, animals, food, feedstuffs, seed and fertilisers.
<b>Packaging materials:</b>	

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Workplace Exposure Guidelines

<b>Workplace exposure standards:</b>	No occupational exposure standards have been established for the product or the other ingredients excluding permethrin.
--------------------------------------	---

Permethrin →10 mg/m<sup>3</sup> TWA for an 8 hour day/5 day working week

**Application in the workplace:**

**Exposure Standards outside:  
The workplace:**

### **Engineering measures**

**Hierarchy of controls:**

**Exposure control measures:**

Ensure adequate ventilation. Use local exhaust ventilation or use while wearing a dust mask to avoid breathing vapour.

**No Hazard indication:**

**Ventilation specification:**

### **Personal Protective Equipment**

**Detail specifications for equipment:**

**Respiratory system:**

If inhalation risk, use an organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

**Skin and body:**

**Hands:**

Impervious gloves

**Eyes:**

Safety glasses

**General hygiene:**

Leave immediately after lighting smoke generators. Thoroughly ventilate treated areas before re-occupying.

To be used strictly in accordance with label instructions.

---

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State:**

Off-white powder

**Colour:**

Off-white

**Odour:**

Permethrin odour

**pH:**

Not available

**Vapour Pressure:**

Not available

**Vapour Density:**

Not applicable

**Boiling Point:**

Not available

**Freezing/melting point:**

Not available

**Solubility:**

Practically insoluble

**Specific gravity or density:**

**Information for flammable material including:**

- **Lower and upper flammability limits**
- **Flashpoint (state test Method)**

Not available

Not available

<b>Auto – ignition Temperature:</b>	>130°C
<b>Octanol/water partition coefficient:</b>	Not available
<b>Explosion properties:</b>	
<b>Oxidation properties:</b>	

---

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable
<b>Conditions to avoid:</b>	None anticipated
<b>Materials to avoid:</b>	None known

<b>Hazardous decomposition Products:</b>	During a fire this product may release smoke, hazardous decomposition products and toxic fumes.
<b>Hazardous polymerization:</b>	None
<b>Specific Data:</b>	
<b>Hazardous reactions :</b>	Chloride compounds and nitrogen oxides.

---

## 11. TOXICOLOGICAL INFORMATION

<b>Acute toxicity – Oral :</b>	6.1D, may be harmful if swallowed.
<b>Acute toxicity – Inhalation:</b>	Of dust: May result in respiratory irritation Of Smoke/vapour: Irritant to mucous membranes and respiratory tract.
<b>Skin irritation :</b>	May cause skin irritation.
<b>Eye irritation:</b>	May cause eye irritation.
<b>Other information:</b>	No other known health effects.
<b>Chronic:</b>	Prolonged or repeated skin contact may lead to allergic dermatitis. Over-exposure may result in nausea, vomiting, diarrhea and in severe cases, central nervous system depression, leading to tremours, convulsions and coma. No other known health effects.

### Information on Product:

#### Acute:

<b>Oral toxicity:</b>	Not available
<b>Dermal toxicity:</b>	LD <sub>50</sub> rat: >2000mg/kg
<b>Inhalation toxicity:</b>	LD <sub>50</sub> rat: =2.3mg/L – 4 hours
<b>Skin irritation:</b>	Slight irritant.
<b>Eye irritation:</b>	Slight irritant.
<b>Sensitization :</b>	A moderate skin sensitizer.

### Information on Components:

#### Acute:

<b>Oral toxicity:</b>	LD <sub>50</sub> rat: >806mg/kg (Permethrin)
<b>Dermal toxicity:</b>	LD <sub>50</sub> rat: >1870 mg/kg (Potassium chlorate)
<b>Inhalation toxicity:</b>	Not available

Skin irritation:	Not available
Eye irritation:	Not available
Sensitisation:	Not available

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>		
<b>Fish</b>	Bluegill sunfish	LC <sub>50</sub> : 1.8 µg/L (48 hours)
<b>Daphnia magna</b>	Rainbow trout (Oncorhynchus mykiss)	LC <sub>50</sub> : 5.4 µg/L (48 hours)
<b>Algae</b>	Water flea (Daphnia magna)	LC <sub>50</sub> : 0.6 µg/L (48 hours)
<b>Bees</b>	Not available	
	Permethrin is toxic to bees.	
	Oral LD <sub>50</sub> : 0.098 µg/bee	
	Contact LD <sub>50</sub> : 0.029 µg/bee	
<b>Bird toxicity:</b>	Permethrin is practically non-toxic to birds.	
	Chicken: Oral LD <sub>50</sub> : >3000 mg/kg	
	Japanese quail: Dietary LD <sub>50</sub> : >13500 mg/kg	

<b>Persistence/degradability Soil</b>	Low soil mobility. High potential for bioaccumulation but is rapidly eliminated from fish (about 80% in 14 days). There is evidence of degradation in soil and water. The half-life in soil is less than 38 days.
---------------------------------------	---

## 13. DISPOSAL CONSIDERATIONS

<b>Methods of disposal :</b>	Waste must not enter waterways. Empty container can be wrapped in paper and placed in waste bin.
------------------------------	---

## 14. TRANSPORT INFORMATION

### International transport regulations

<b>International transport regulations:</b>	Classified as Dangerous Goods for transport by sea and air according to the criteria of the UN Model Regulations for Transport of Dangerous Goods 13 <sup>th</sup> Edition.
<b>UN number:</b>	1479
<b>Proper shipping name:</b>	OXIDIZING SOLID, N.O.S, (PERMETHRIN)
<b>Class &amp; subsidiary risk:</b>	5 and 9.
<b>Packing Group:</b>	III
<b>Hazchem Code:</b>	2X
<b>EPG</b>	9C1

### Land - Road/Railway

### Proper shipping name :

---

## 15. REGULATORY INFORMATION

**ACVM Registered Number:**

**HSNO Approval Code:**

HSR100873

---

## 16. OTHER INFORMATION

### **Additional information:**

#### *Disclaimer*

*This Safety Data Sheet is based on the most recent information available. To the extent permitted by law, users of this information accept that neither the manufacturer, Etec Crop Solutions as distributor, nor any other distributor have any liability or responsibility whatsoever for any loss, damage or injury whether in contract or tort, whether direct, indirect or consequential howsoever arising in connection with the supply of these information.*

#### *Trademarks*

*SILO is a trademark of Etec Crop Solutions Ltd*