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UPDATED BY: Ursula Potgieter
UPDATED: 25 March 2013

MATERIAL SAFETY DATA SHEET

INSECTIDUST

1. PRODUCT IDENTIFICATION:

Name: Small Pack Solutions
Address: No. 18 Aschenberg Street
Chamdor
Krugersdorp
Tel. Nr.: (011) 769 1300
Fax Nr.: (011) 762 5712
Emergency Tel Nr.: 083 326 3581 / 082 823 4473OR 0800 –111 –229
Trade Name: Insectidust

2. COMPOSITION:

Chemical Family: Organophosphorus pesticide
Chemical Name: MERCAPTOTHION
Diethyl (dimethoxythiophosphorylthio)succinate; S-1,2-is(ethoxycarbonyl)ethyl
O,O- dimethyl phosphorodithioate
 $C_{10}H_{19}O_6PS_2$
PERMETHRIN (PYRETHROID)
3-phenoxybenzyl(1RS,3RS;1RS,3SR)-3-(2,2-dichlorovinyl)-2,2-
dimethylcyclopropanecarboxylate.
 $C_{21}H_{20}Cl_2O_3$
UN Nr.: 2783
C.A.S. Nr.: 121-75-5 (Mercaptothion Technical) /52645-53-1 (Permethrin Technical)
IMCO: 6.1; 3

Hazardous Components: Mercaptothion 50 g/kg
Permethrin 0,4 g/kg

3. HAZARD IDENTIFICATION:

Effects of overexposure: The toxin is an organophosphorus cholinesterase inhibitor; may cause headache, fatigue, faintness, giddiness, excessive sweating, nausea, abdominal pains, vomiting, diarrhoea, tightness of the chest, anxiety, blurred vision, muscle twitching beginning in the eyelids and tongue, small pupils, respiratory distress.

Inhalation: Avoid inhalation of spray mist.
The toxin is an organophosphate cholinesterase inhibitor; may cause shortness of breath, dizziness, profuse sweating, nausea, vomiting, abdominal cramps and/or respiratory distress.

Skin: Avoid repeated or prolonged contact. The toxin is an organophosphorus cholinesterase inhibitor, readily absorbed through intact skin. Contact may cause redness, irritation and dermatitis.

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Eyes: Irritating, may cause redness, pain, blurred vision, conjunctivitis.
Ingestion: The toxin is an organophosphorus cholinesterase inhibitor; may cause headache, fatigue, faintness, giddiness, excessive sweating, nausea, abdominal pains, vomiting, diarrhoea, tightness of the chest, anxiety, blurred vision, muscle twitching beginning in the eyelids and tongue, small pupils, respiratory distress.

4. FIRST AID MEASURES:

Inhalation: Remove patient from source of poisoning to well ventilated area and keep him quiet and reassured. If necessary, administer artificial respiration and oxygen or closed chest cardiac massage.

Skin: Immediately remove contaminated clothing, wear rubber gloves to avoid contact with contaminated clothing, rinse the affected skin area with plenty of soap and cool water or shower.

Eyes: Immediately wash eyes with copious amounts of clean water for at least 15 minutes, cover with a sterile pad.

Ingestion: Keep patient calm and reassured, put in recovery position, rinse mouth with water. Never give anything by mouth to an unconscious person. **DO NOT** apply direct mouth to mouth respiration, use a disposable protective mouthpiece. **Persons attending the victim should avoid direct contact with the vomit, wear rubber gloves and protective clothing. SEEK MEDICAL ASSISTANCE.**

NOTE TO PHYSICIAN:

Administer Atropine sulphate, intravenously (1 to 4 mg) every 5 to 10 minutes until signs of atropinization, (dry flushed skin and tachycardia); 2-PAM 50 mg/kg up to total dose of 1 to 2 g or two thirds of this dose of Protopam. Repeat oximes if necessary. Do not give morphine.

**SEEK MEDICAL ADVICE PROMPTLY AND SHOW THIS MSDS
TO A MEDICAL PRACTITIONER**

5. FIRE-FIGHTING MEASURES:

Flash Point: Not applicable
Flammability: Not flammable.
Auto ignition Temperature: Not available
Decomposition Temperature: Not available
Acute Hazards: Unlikely in normal use.
Toxin is mainly an organophosphorous cholinesterase inhibitor.

Special fire fighting procedures: Use dry powder, foam, dry chemical or CO₂ to extinguish fires.
Special protective equipment: Do not breathe fumes. For fires in enclosed areas, fire fighters must use nitrile rubber gloves, close fitting safety goggles, effective respiratory protection when necessary, full length protective clothing and boots should be worn when handling this material in an emergency. Toxic fumes may be given off.

Hazardous decomposition products: Gives off irritating or toxic fumes (or gases) in a fire, including phosphorous oxides and sulphur oxides.

6. ACCIDENTAL RELEASE MEASURES:

Notification procedures:

Report spills as required to appropriate authorities.

Procedures if material is released or spilled:

Absorb on fire retardant treated sawdust, diatomaceous earth, sand, peat sorb, etc. Shovel in and dispose of at an appropriate waste disposal facility, in accordance with current applicable laws and regulations, and product characteristics at time of disposal.

Environmental Precautions:

Prevent spills from entering storm sewers or drains and contact with soil.

7. HANDLING AND STORAGE:

Handling /storage precaution: Avoid prolonged repeated skin contact. Do not contaminate water, food or feed by storage or disposal. Store in a secure, dry, well –ventilated separate room, building or covered area. Not for use or storage on or around home. Keep away from sources of ignition and protect from exposure to fire and heat separate from incompatible materials. Do not allow entering public sewers and water sources. If contamination of drainage systems or water sources, is unavoidable, inform the appropriate authorities immediately. For use as directions on the label only. Wash thoroughly after application. Remove and wash contaminated clothing after use. Wash applicator, receptacles, etc., thoroughly before re-using with other materials.

Note:

During application and when cleaning equipment and protective clothing, contamination of all sources of drinking water, rivers, dams, crops or grazing shall be prevented.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Inhalation:** Avoid inhalation of spray dust. Use only in well –ventilated areas, in case of insufficient ventilation, wear suitable respiratory equipment. Approved respiratory equipment must be used when vapour or mists concentrations exceed applicable standards.
- Skin:** Wear protective clothing, as well as protective gloves. Launder contaminated clothing before re –use. Avoid skin contact. Keep working clothes separately and do not take home.
Good personal hygiene practices should always be followed.
- Eyes:** Avoid contact with eyes. Wear eye /face protection. When handling this product, wear goggles giving completely eye protection. Normal industrial eye protection practices should be employed.
- Ingestion:** Keep away from food and feedstuffs. Do not eat, drink or smoke whilst handling this product. Wash hands and face before eating and drinking.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:	Pale, off –white to gray free flowing powder.
Odor:	Mercaptan odor.
Boiling Point: (@760 mm Hg):	N/A
Melting Point:	N/A
Vapor Pressure: (@ 30°C)	5.3 mPa at 30 C (for malathion technical)
Solubility:	Insoluble in water.

10. STABILITY AND REACTIVITY DATA:

Stability:

Stable.

Conditions to avoid:

Not known

Compatibility:

Mixing with strongly alkaline or acidic substances should be avoided.

(Materials to avoid)

May attack iron and some other metal as well as some plastics and rubbers.

Hazardous decomposition products:

Combustion may produce carbon oxides, phosphorous oxides and sulphur oxides.

11. TOXICOLOGICAL INFORMATION:

Mercaptothion (Technical):

Oral: Acute oral LD₅₀ for rats 1375-5500 mg/kg (pure), mice 775-3320 mg/kg.

Skin and eye: Acute percutaneous LD₅₀ (24 h) for rabbits 4100-8800, rats >2000 mg/kg.

Inhalation: LC₅₀ (4 h) for rats >5.2 mg/l.

Permethrin (Technical):

Oral: Oral LD₅₀ values of permethrin depend on such factors as: carrier, *cis/trans* ratio of the sample, the test species, its sex, age and degree of fasting; values reported sometimes differ markedly.

Values for a *cis/trans* ratio of *c.* 40:60 are: for rats 430-4000, mice 540-2690 mg/kg; with a 20:80 ratio, the LD₅₀ is *c.* 6000 mg/kg. **Skin and eye:** Acute percutaneous LD₅₀ for rats >2500, rabbits >2000 mg/kg.

Mild eye and skin irritant (rabbits).

Moderate skin sensitiser.

Inhalation: LC₅₀ (3 h) for mice and rats >685 mg/m³ air; (separate study gives >13 800 mg/m³).

Other: No mutagenic, teratogenic, or carcinogenic activity.

12. ECOLOGICAL INFORMATION:

For Mercaptothion:

Birds: Dietary LC₅₀ (5 d) for bobwhite quail 3500, ring-necked pheasants 4320 mg/kg diet.

Fish: LC₅₀ (96 h) for bluegill sunfish 0.1, largemouth bass 0.28 mg/l.

Daphnia: EC₅₀ (48 h) 1.0 µg/l.

Algae: EC₅₀ (72 h) 13 mg/l.

Bees: Toxic to bees. LD₅₀ (topical) 0.71 µg/bee.

Worms: LC₅₀ 613 mg/kg soil.

For Permethrin:

Birds: Typical oral LD₅₀ values for a *cis/trans* ratio of *c.* 40:60 are: for chickens >3000, mallard ducks >9800, Japanese quail >13 500 mg/kg.

Fish: LC₅₀ (96 h) for rainbow trout 2.5 µg/l; (48 h) for rainbow trout 5.4, bluegill sunfish 1.8 µg/l.

Daphnia: LC₅₀ (48 h) 0.6 µg/l.

Bees: Toxic to bees. LD₅₀ (24 h) (oral) 0.098 µg/bee; (topical) 0.029 µg/bee.

13. DISPOSAL CONSIDERATIONS:

Waste disposal:

Rinse empty container 3 times and destroy by perforation or flattening, and do not use for any other purpose. Product should be utilized completely to avoid disposal. If not possible, dispose of at an appropriate waste disposal facility, in accordance with current applicable laws and regulations. Soak up spillage with dry sand, shovel up and dispose of as for toxic waste in accordance with local/national regulations. DO NOT burn. Protective clothing to be worn when clearing spillage.

14. TRANSPORT INFORMATION:

Hazardous description:	Organophosphorus pesticide, solid, toxic #
Label:	Keep away from food and foodstuffs.
UN No.:	2783
UN Hazard Class:	6.1
Packing Group:	III
Xn Symbol:	Poison

15. REGULATORY INFORMATION:

Currently registered in the Republic of South Africa.

16. OTHER INFORMATION:

- Do not use where milk is processed or stored.
- Poisonous by contact, swallowing and inhalation.
- Toxic to fish, bees and wild life.
- Store away from food and feedstuffs.
- Keep out of reach of children.
- Keep container well closed.