



MATERIAL SAFETY DATA SHEET

IMPERATOR[®] SMOKE GENERATOR INSECTICIDE

Date of Issue: October 2008

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product name: **Imperator[®] Smoke Generator Insecticide**
Other names: None
Recommended use: Insecticide
Supplier: AgNova Technologies Pty Ltd
ACN: 097 705 158
Address: Suite 10/857 Doncaster Road
Doncaster East
Victoria 3109 Australia
Telephone: (03) 9840 2333
Facsimile: (03) 9840 2555
Website: www.agnova.com.au
Contact: Managing Director
Emergency Telephone Number: 1800 033 111 (24 hours)

2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE - DANGEROUS GOOD

Hazard designation: Hazardous according to the criteria of NOHSC.
Risk phrases: R9 – Explosive when mixed with combustible material.
R20 – Harmful by inhalation.
R22 – Harmful if swallowed.
Safety phrases: S2 – Keep out of reach of children.
S13 – Keep away from food, drink and animal feeding stuffs.
S16 – Keep away from sources of ignition – No Smoking.
S27 – Take off immediately all contaminated clothing.
ADG classification: This product is classified as a Class 9 Dangerous Good under the Australian Code for the Transport of Dangerous Goods by Road and Rail.
SUSDP classification: Poison Schedule 6 (S6)
(Standard for the Uniform Scheduling of Drugs and Poisons)



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3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (%w/w):
Potassium perchlorate	3811-04-9	12.7
Permethrin	52645-53-1	13.5
Other ingredients	(non hazardous)	Balance

4. FIRST AID MEASURES

Inhalation:	Move person to fresh air. Aid in breathing, if necessary, and get immediate medical attention.
Skin contact:	If skin contact occurs, remove contaminated clothing and wash with soap and water. If irritation occurs seek medical advice.
Eye contact:	In case of contact, immediately flush eyes with copious quantities of water for at least 15 minutes. Seek medical advice.
Ingestion:	If swallowed rinse mouth with water and give water to drink. Immediately contact a doctor or Poisons Information Centre (telephone: 13 11 26) and follow the advice given. Only induce vomiting at the instruction of a physician.
First Aid Facilities:	Ensure washing facilities are available.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water fog, foam or dry agent.
Hazards from combustion products:	During a fire this product may release smoke, hazardous decomposition products and toxic fumes.
Precautions for fire fighters:	Wear self-contained breathing apparatus and structural fire fighters uniform.



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6. ACCIDENTAL RELEASE MEASURES

Wear suitable protective clothing and boots. Prevent spill from entering drains, sewers or any body of water. Contain and absorb with sand, earth or inert absorbent. Scoop or shovel into sealable containers for disposal in accordance with applicable local, state and federal regulations. Decontaminate area with soap and water. Rinse.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Avoid breathing vapour/mist. Use with adequate ventilation.

Storage: Store in a cool, dry well-ventilated area out of direct sunlight. Store in a locked room away from children, authorised persons, animals, food, feedstuffs, seed and fertilisers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards: No occupational exposure standards have been established for the product or the other ingredients excluding Permethrin.

Permethrin → 10 mg/m³ TWA for an 8 hour day/5 day working week.

Engineering controls: Ensure adequate ventilation. Use with local exhaust ventilation or while wearing a dust mask to avoid breathing vapour.

Personal Protective Equipment:

Eyes:	Safety glasses.
Gloves:	Impervious gloves.
Respiratory:	If inhalation risk use an organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Other Use Precautions: Other: Leave immediately after lighting smoke generators. Thoroughly ventilate treated areas before re-occupying.

To be used strictly in accordance with label instructions.



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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off-white powder
Odour:	Permethrin odour
Vapour pressure:	Not applicable
Vapour density:	Not applicable
Boiling point:	Not available
Freezing/melting point:	Not available
Solubility:	Practically insoluble
Density:	Not available
pH:	Not available
Molecular Weight:	Not available
Flash Point:	Not applicable
Flammability (explosive) limits:	Not available
Auto-ignition temperature:	>130°C
Octanol/water partition coefficient:	Not available

10. STABILITY AND REACTIVITY

Chemical stability:	Stable
Hazardous polymerisation:	None
Conditions to avoid:	None anticipated
Incompatible materials:	None known
Hazardous decomposition products:	During a fire this product may release smoke, hazardous decomposition products and toxic fumes.

11. TOXICOLOGICAL INFORMATION**POTENTIAL HEALTH EFFECTS****Information on Product:**

- Inhalation:** Of dust - May result in respiratory irritation.
Of smoke/vapour – irritant to mucous membranes and respiratory tract.
- Skin contact:** May cause skin irritation.
- Eye contact:** May cause eye irritation.
- Ingestion:** No adverse health effects are expected from swallowing.
- Other:** No other known health effects.

Chronic:

Prolonged or repeated skin contact may lead to allergic dermatitis.
Overexposure may result in nausea, vomiting, diarrhea and in severe cases central nervous system depression, leading to tremours, convulsions and coma.

Information on Product:**Acute:**

- Oral toxicity:** Not available
- Dermal toxicity:** LD₅₀ rat: >2000 mg/kg
- Inhalation toxicity:** LC₅₀ rat: = 2.3 mg/L/4 hours
- Skin irritation:** Slight irritant
- Eye irritation:** Slight irritant
- Sensitisation:** A moderate skin sensitiser

Information on Components:**Acute:**

- Oral toxicity:** LD₅₀ rat: >806 mg/kg (Permethrin)
LD₅₀ rat: >1870 mg/kg (Potassium chlorate)
- Dermal toxicity:** Not available
- Inhalation toxicity:** Not available
- Skin irritation:** Not available
- Eye irritation:** Not available
- Sensitisation:** Not available



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12. ECOLOGICAL INFORMATION

For the active ingredient; Permethrin

Fish toxicity: Bluegill sunfish LC₅₀: 1.8 µg/L (48 hours)
Rainbow trout (*Oncorhynchus mykiss*) LC₅₀: 5.4 µg/L (48 hours)

Daphnia toxicity: Water flea (*Daphnia magna*) LC₅₀: 0.6 µg/L (48 hours)

Toxicity to algae: Not Available

Bird toxicity: Permethrin is practically non-toxic to birds.
Chicken: Oral LD₅₀: >3000 mg/kg
Japanese quail: Dietary LD₅₀: >13500 mg/kg

Bee toxicity: Permethrin is toxic to bees
Oral LD₅₀: 0.098 µg/bee
Contact LD₅₀: 0.029 µg/bee

Other: None

Environmental fate, persistence and degradation: 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

Disposal of Waste Method: Waste must not enter waterways.

Contaminated Packaging: Empty containers can be wrapped in paper and placed in waste bin.



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TRANSPORT INFORMATION

UN number: 3077
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Class and Subsidiary Risk: 9
Packing Group: III
EPG: 9C1
Hazchem code: 2X

14. REGULATORY INFORMATION

APVMA Registered according to the Agricultural and Veterinary Chemicals Act 1988
APVMA approval number: 59694
SUSDP Schedule 6

15. OTHER INFORMATION

Trademark information: ® IMPERATOR is a registered trademark of a Syngenta Group Company

Abbreviations and Acronyms: APVMA – Australian Pesticides and Veterinary Medicines Authority
NOHSC – National Occupational Health and Safety Commission
SUSDP – Standard for the Uniform Scheduling of Drugs and Poisons

Preparation information: Replaces Feb 2007 edition.
Reason for update: updating supplier contact information.

Data sources: Manufacturer and published data.

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

The opinions expressed herein are those of qualified experts with the manufacturer. Since the use of this information and of these opinions and the conditions of use of this product are not within the control of AgNova Technologies Pty Ltd, it is the user's obligation to determine the conditions of safe use of the product.

END OF MSDS