

1. IDENTIFICATION

Product Identifier: **Imperator® Smoke Generator Insecticide**

Other Means of Identification: None

Recommended Use of the Chemical and Restrictions on Use: Insecticide

Details of Manufacturer or Importer: AgNova Technologies Pty Ltd
Suite 3/935 Station Street
Box Hill North Victoria 3129 Australia
(03) 9899 8100
www.agnova.com.au

Emergency Phone Number: 1800 033 111 (24 hours)
Poisons Information Centre 13 11 26

Smoke generators are ready to use products contained in a plastic or aluminium container. The following information is intended to give general health and safety guidance on the storage and transport of the product.

2. HAZARD(S) IDENTIFICATION

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.



Acute toxicity: Category 4
H302 Harmful if swallowed.

Skin sensitisation: Category 1
H317 May cause an allergic skin reaction.

Eye irritation: Category 2
H319 Causes serious eye irritation.

Specific target organ toxicity - single exposure: Category 3
H335 May cause respiratory irritation.

Acute aquatic toxicity: Category 1
H400 Very toxic to aquatic life.

IMPERATOR® SMOKE GENERATOR INSECTICIDE

Date of Issue: November 2016

Chronic aquatic toxicity: Category 1

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.

P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as nonhazardous waste

Other hazards

Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours). Ignites readily. Product burns without a flame to give a dense white harmful smoke.

ADG Classification: Not classified as Dangerous Goods for land transport under the Australian Code for Transport of Dangerous Goods by Road and Rail special provision AU01 – refer section 14

SUSMP Classification: Not scheduled
(Standard for Uniform Scheduling of Medicines and Poisons)

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (%):
Potassium chlorate	3811-04-9	>1.00-<25.00
Permethrin	52645-53-1	13.50
Other ingredients	(non hazardous)	Balance

EU classification for potassium chlorate: Oxidising Solid cat 1

H271: May cause fire or explosion; strong oxidiser.

4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (Phone 13 11 26), and follow the advice given. Show this Safety Data Sheet to a doctor.

Description of Necessary First Aid Measures:

General advice: Remove contaminated clothing immediately and dispose of safely.

Inhalation: Move person to fresh air and keep at rest. Call a physician or poison control centre immediately.

Skin Contact: Immediately wash with plenty of soap and water for at least 15 minutes. Warm water may increase the subjective severity of the irritation/paraesthesia. This is not a sign of systemic poisoning. In

IMPERATOR[®] SMOKE GENERATOR INSECTICIDE

Date of Issue: November 2016

case of skin irritation, application of oils or lotions containing vitamin E may be considered. If symptoms persist, call a physician.

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Warm water may increase the subjective severity of the irritation/paraesthesia. This is not a sign of systemic poisoning. Apply soothing eye drops, if needed anaesthetic eye drops. Get medical attention if irritation develops and persists.

Ingestion: Rinse out mouth and give water in small sips to drink. Do NOT induce vomiting. If swallowed, seek medical advice immediately and show this container or label.

First Aid Facilities: Ensure washing facilities are available.

Symptoms Caused by Exposure, both acute and delayed

Symptoms Local: Skin and eye paraesthesia which may be severe, Usually transient with resolution within 24 hours, Skin, eye and mucous membrane irritation, Cough, Sneezing

Systemic: Discomfort in the chest, Tachycardia, Hypotension, Nausea, Abdominal pain, Diarrhoea, Vomiting, Dizziness, Blurred vision, Headache, Anorexia, Somnolence, Coma, Convulsions, Tremors, Prostration, Airway hyper reaction, Pulmonary oedema, Palpitation, Muscular fasciculation, Apathy

Medical Attention and Special Treatment:

Risks This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.

Treatment Local treatment: Initial treatment: symptomatic.
Systemic treatment: Initial treatment: symptomatic. Monitor: respiratory and cardiac functions. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. Keep respiratory tract clear. Give oxygen or artificial respiration if needed. In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens. If not effective, phenobarbital may be used. Contraindication: atropine. Contraindication: derivatives of adrenaline. There is no specific antidote. Recovery is spontaneous and without sequela

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Unsuitable: High volume water jet
Specific Hazards Arising from the Chemical:	Dangerous gases are evolved in the event of a fire. Contains potassium chlorate which is classified as an oxidising agent.
Special Protective Equipment and Precautions for Fire Fighters:	In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.
Further information:	Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:	Keep people away from and upwind of spill/leak. Avoid dust formation. Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke. Avoid contact with eyes and skin.
Environmental Precautions:	Material is toxic to aquatic organisms. Do not flush to drains or sewers. Do not contaminate streams, rivers or water courses.
Methods and Materials for Containment and Cleaning Up:	The nature of this product, when contained in commercial packs, makes spillage unlikely. However if significant spill occurs, clear area of all unprotected personnel. Wear protective equipment. Sweep up small spills and place in a suitable container for recovery or disposal. Keep spills and cleaning run-off out of drains or sewers and open bodies of water. Empty containers and product should not be burnt. Observe government regulations.



SAFETY DATA SHEET

IMPERATOR® SMOKE GENERATOR INSECTICIDE

Date of Issue: November 2016

7. HANDLING AND STORAGE

Precautions for Safe Handling:

No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Avoid dust formation. Ensure adequate ventilation. Dust may form explosive mixture in air.

Hygiene measures: When using, do not eat, drink or smoke. Remove soiled clothing immediately and clean thoroughly before using again. Contaminated work clothing should not be allowed out of the workplace. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Wash hands immediately after work, if necessary take a shower.

Conditions for Safe Storage, including any Incompatibilities:

Store in a place accessible by authorized persons only. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Protect from freezing. Keep away from food, drink and animal feeding stuffs. Suitable materials: Polyethylene film within an outer package

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Control Measures:

Components	CAS-No.	Control parameters	Update	Basis
Permethrin	52645-53-1	10 mg/m ³ (TWA)		OES BCS*

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Biological Monitoring: No data available

Control Banding: No data available

Engineering Controls: Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004). Engineering controls should be used in preference to personal protective equipment wherever practicable. Refer also to COSHH Essentials.

Individual Protection Measures, for example, Personal Protective Equipment (PPE):

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

IMPERATOR® SMOKE GENERATOR INSECTICIDE

Date of Issue: November 2016

- Respiratory protection** Wear respirator with a particle filter mask (protection factor 4) conforming to European norm EN149FFP1 or equivalent. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.
- Hand protection** Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness of 0.4 mm). Wash when contaminated and dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.
- Eye protection** Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).
- Skin and body protection** Wear standard coveralls and Category 3 Type 4 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White to light beige powder
Odour:	Characteristic
Ignition temperature:	>130°C
Bulk density:	ca. 940 kg/m ³
Solubility:	Partly soluble
Oxidizing properties:	Contains potassium chlorate which is classified as an oxidising agent.
Octanol/water partition coefficient:	Not available

10. STABILITY AND REACTIVITY

- Chemical Stability:** Stable under recommended use and storage conditions.
- Possibility of Hazardous Reactions:** No hazardous reactions when stored and handled according to prescribed instructions.
- Conditions to Avoid:** Extremes of temperature and direct sunlight. Heat, flames and sparks.
- Incompatible Materials:** Store only in the original container.
- Hazardous Decomposition Products:** No decomposition products expected under normal conditions of use

11. TOXICOLOGICAL INFORMATION**Acute Toxicity:**

Oral Toxicity: LD50 (rat) ca. 2,000 mg/kg

Inhalation Toxicity: LC50 (rat) > 4.2 mg/l
Exposure time: 4 h
Highest attainable concentration.
Irritating to respiratory system.

Dermal Toxicity: ATE > 2,000 mg/kg
ATE – acute toxicity estimate

Skin Corrosion/Irritation: No skin irritation (rabbit)

Serious Eye Damage/Irritation: Irritating to eyes (rabbit)

Respiratory or Skin Sensitisation: Sensitising (guinea pig)
Information given is based on data on the components and the toxicology of similar products.

Repeated Dose Toxicity:
Permethrin did not cause specific target organ toxicity in experimental animal studies.

Germ Cell Mutagenicity:
Permethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

IMPERATOR® SMOKE GENERATOR INSECTICIDE

Date of Issue: November 2016

Carcinogenicity:

Permethrin caused at high dose levels an increased incidence of tumours in mice in the following organ(s): liver, Lungs. The mechanism that triggers tumours in rodents is not relevant for the low exposures encountered under normal use conditions.

Reproductive Toxicity:

Permethrin did not cause reproductive toxicity in a two-generation study in rats.

Developmental Toxicity:

Permethrin did not cause developmental toxicity in rats and rabbits. Further information: Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).

Specific Target Organ Toxicity (STOT) – Single Exposure:

No data available

Specific Target Organ Toxicity (STOT) – Repeated Exposure:

No data available

Aspiration Hazard:

No data available

12. ECOLOGICAL INFORMATION**Ecotoxicity:**

Toxicity to Fish: LC50 (*Poecilia reticulata* (guppy)) 0.0076 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient permethrin.

Toxicity to Aquatic Invertebrates: EC50 (Water flea (*Daphnia magna*)) 0.00017 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient permethrin.

Toxicity to Aquatic Plants: EC50 (*Selenastrum capricornutum*) 0.497 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient permethrin.

Persistence and Degradability:

Biodegradability Permethrin: not rapidly biodegradable
Koc Permethrin: Koc: 100000

Bioaccumulative Potential: Permethrin: Bioconcentration factor (BCF) 300
Does not bioaccumulate.



SAFETY DATA SHEET

IMPERATOR® SMOKE GENERATOR INSECTICIDE

Date of Issue: November 2016

Mobility in Soil: Permethrin: Immobile in soil

PBT and vPvB Assessment: Permethrin: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

Other Adverse Effects: No other effects to be mentioned.

13. DISPOSAL CONSIDERATIONS

Disposal Containers and Methods:

In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant. Advice may be obtained from the local waste regulation authority.

Dispose of empty and cleaned packaging safely. Not completely emptied packagings should be disposed of as hazardous waste. Follow advice on product label and/or leaflet.

14. TRANSPORT INFORMATION

Transport Classification: **Road and Rail Transport:** Not dangerous goods under the ADG7 when being transported in IBCs or other receptacles <500 L (kg), (Special Provision AU01).
Marine and Air: Classified as Dangerous Goods for transport by sea and air according to the criteria of the UN Model Regulations for Transport of Dangerous Goods 13th Edition. This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

UN number: 3077
Proper Shipping Name or Technical Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (PERMETHRIN MIXTURE)
Transport Hazard Class: 9
Packing Group: III
Environmental Hazards for Transport: Marine Pollutant



SAFETY DATA SHEET

IMPERATOR® SMOKE GENERATOR INSECTICIDE

Date of Issue: November 2016

Purposes:

Special

Precautions for

User:

Hazchem code: 2Z

15. REGULATORY INFORMATION

APVMA Registered according to the Agricultural and Veterinary Chemicals Act 1994

APVMA approval number: 59694

SUSMP Schedule 5

16. OTHER INFORMATION

Trademark information: ® IMPERATOR is a registered trademark of AgNova Technologies Pty Ltd.

Abbreviations and Acronyms: APVMA – Australian Pesticides and Veterinary Medicines Authority
ATE – Acute Toxicity Estimate
GHS – Globally Harmonized System of Classification and Labelling of Chemicals
SWA – Safe Work Australia
SUSMP – Standard for the Uniform Scheduling of Medicines and Poisons
HCIS – Hazardous Chemical Information System.

Date of Preparation or Revision: November 2016.

Reason for Revision: To comply with GHS.

Data sources: Manufacturer and published data.

This SDS 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 SDS 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 SDS