



## SAFETY DATA SHEET

### Section 1 - Identification

**Product identifier** Imperator® Insecticide Smoke Generator 31G

#### Other means of identification

**SDS No.** 796

#### Recommended use of the chemical and restrictions on use

**Recommended use** Insecticide.

**Restrictions on use** No other uses are advised.  
Keep out of the Reach of Children!

#### Details of manufacturer or importer

##### Manufacturer

**Company name** AgNova Technologies Pty Ltd  
**Address** Unit 4, 482 Kingsford Smith Drive  
Hamilton, Queensland 4007  
Australia

**Telephone** AgNova Technologies Pty Ltd 03 9899 8100 (office hours)  
Ltd

**Website** agnova.com.au

**E-mail** info@agnova.com.au

**Emergency phone number** IXOM ERS 1800 033 111 (24 hours)  
Poisons Information Centre 13 11 26

### Section 2 - Hazard(s) identification

#### Classification of the hazardous chemical

**Physical hazards** Oxidising solids Category 3

**Health hazards** Sensitisation, skin Category 1

**Environmental hazards** Hazardous to the aquatic environment, acute hazard Category 1

Hazardous to the aquatic environment, long-term hazard Category 1

#### Label elements, including precautionary statements

##### Hazard symbol(s)



Flame over circle Exclamation mark Environment

**Signal word** Warning

**Hazard statement(s)** May intensify fire; oxidiser.  
May cause an allergic skin reaction.  
Very toxic to aquatic life.  
Very toxic to aquatic life with long lasting effects.

##### Precautionary statement(s)

###### Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Keep away from clothing and other combustible materials.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Avoid breathing dust.  
Avoid release to the environment.  
Contaminated work clothing should not be allowed out of the workplace.

###### Response

IF ON SKIN: Wash with plenty of water.  
If skin irritation or rash occurs: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.  
In case of fire: Use appropriate media to extinguish.  
Collect spillage.

<b>Storage</b>	Not available.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Supplemental information</b>	This is a pesticide product registered in Australia under the Australian Pesticides and Veterinary Medicines Authority (APVMA) and is subject to certain labeling requirements. These requirements may differ from the classification criteria and hazard information required for GHS compliant safety data sheets (SDS), and for workplace labels of non-pesticide chemicals.
<b>Other hazards which do not result in classification</b>	None known.

### Section 3 - Composition and information on ingredients

Identity of chemical ingredients	CAS number and other unique identifiers	Concentration of ingredients
Permethrin	52645-53-1	13.5 %
Potassium chlorate	3811-04-9	10 - 30 %
Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> )	14807-96-6	30 - 60 %

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### Section 4 - First aid measures

#### Description of necessary first aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	If swallowed, seek medical advice immediately and show this container or label. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person. Do not induce vomiting.
<b>Personal protection for first-aid responders</b>	Take off all contaminated clothing immediately. Contact with combustible material may cause fire. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
<b>Symptoms caused by exposure</b>	Dusts may irritate the respiratory tract, skin and eyes. May cause an allergic skin reaction. Dermatitis. Rash.
<b>Medical attention and special treatment</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

### Section 5 - Firefighting measures

#### Extinguishing media

<b>Suitable extinguishing equipment</b>	Foam. Powder. Carbon dioxide (CO <sub>2</sub> ). Water spray, wet sand or wet earth.
<b>Unsuitable extinguishing equipment</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Greatly increases the burning rate of combustible materials. Containers may explode when heated. During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Prevent fire extinguishing water from contaminating surface water or the ground water system.
<b>Hazchem code</b>	1Y
<b>General fire hazards</b>	May intensify fire; oxidiser. Contact with combustible material may cause fire.

### Section 6 - Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	Avoid inhalation of dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
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<b>For emergency responders</b>	Keep unnecessary personnel away. Keep away from clothing and other combustible materials. Ensure adequate ventilation. Avoid inhalation of dust. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Environmental precautions</b>	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
<b>Methods and materials for containment and cleaning up</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Ventilate the contaminated area. Minimise dust generation and accumulation. Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. Wear appropriate protective equipment and clothing during clean-up. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk.
	Large Spills: Wet down with water and dyke for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.
	Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

## Section 7 - Handling and storage

<b>Precautions for safe handling</b>	Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Minimise dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Keep away from heat. Provide appropriate exhaust ventilation at places where dust is formed. Take any precaution to avoid mixing with combustibles. Keep away from clothing and other combustible materials. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Avoid release to the environment.
<b>Conditions for safe storage, including any incompatibilities</b>	Keep away from heat. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Do not store near combustible materials. Store away from incompatible materials (see Section 10 of the SDS).

## Section 8 - Exposure controls and personal protection

**Control parameters** Follow standard monitoring procedures.

### Occupational exposure limits

#### Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)

Components	Type	Value
Permethrin (CAS 52645-53-1)	TWA	5 mg/m <sup>3</sup>
Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> ) (CAS 14807-96-6)	TWA	2.5 mg/m <sup>3</sup>

#### US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
Permethrin (CAS 52645-53-1)	TWA	5 mg/m <sup>3</sup>	
Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> ) (CAS 14807-96-6)	TWA	2 mg/m <sup>3</sup>	Respirable fraction.

#### UK. OELs. Workplace Exposure Limits (WELs) (EH40/2005 (Fourth Edition 2020)), Table 1

Components	Type	Value	Form
Permethrin (CAS 52645-53-1)	TWA	1 mg/m <sup>3</sup>	
Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> ) (CAS 14807-96-6)	TWA	1 mg/m <sup>3</sup>	Respirable dust.

#### Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG), as updated

Components	Type	Value	Form
Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> ) (CAS 14807-96-6)	TWA	4 mg/m <sup>3</sup>	Inhalable dust.

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Control banding** Not available.

**Engineering controls** Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL (occupational exposure limit), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

**Individual protection measures, such as personal protective equipment (PPE)**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves. Frequent change is advisable.

**Other** Wear appropriate chemical resistant clothing.

**Respiratory protection** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Wear respirator with dust filter.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**Hygiene measures** Keep from contact with clothing and other combustible materials. Remove and wash contaminated clothing promptly. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

**Section 9 - Physical and chemical properties**

**Physical state** Solid.  
**Form** Powder.  
**Colour** Off-white.  
**Odour** Odourless.  
**Odour threshold** Not available.  
**pH** Not available.  
**Melting point/freezing point** Not available.  
**Boiling point and boiling range** Not available.  
**Flash point** Not available.  
**Evaporation rate** Not available.  
**Flammability (solid, gas)** Not available.  
**Upper/lower explosive limits**  
**Explosion limit - lower (%)** Not available.  
**Explosion limit - upper (%)** Not available.  
**Vapour pressure** Not available.  
**Vapour density** Not available.  
**Relative density** Not available.  
**Solubility**  
**Solubility (water)** Partly soluble.  
**Partition coefficient: n-octanol/water** Not available.  
**Auto-ignition temperature** Not available.  
**Decomposition temperature** Not available.  
**Viscosity** Not available.  
**Particle characteristics** Not available.  
**Data relevant with regard to physical hazard classes** No relevant additional information available.  
**Other physical and chemical parameters**  
**Explosive properties** Not explosive.  
**Oxidising properties** May intensify fire; oxidiser.

## Section 10 - Stability and reactivity

<b>Reactivity</b>	Greatly increases the burning rate of combustible materials. Reacts with acids liberating toxic gas (chlorine).
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Heat. Contact with incompatible materials. Avoid electro-static discharge.
<b>Incompatible materials</b>	Combustible material. Strong oxidising agents. Reducing Agents. Strong acids and bases. Halogenated materials.
<b>Hazardous decomposition products</b>	Ammonium chloride. Ammonia. Carbon oxides. Nitrogen oxides (NOx). Hydrogen cyanide (hydrocyanic acid).

## Section 11 - Toxicological information

### Information on possible routes of exposure

<b>Inhalation</b>	Dust may irritate respiratory system. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Dust or powder may irritate the skin. May cause an allergic skin reaction.
<b>Eye contact</b>	Dust may irritate the eyes.
<b>Ingestion</b>	May cause discomfort if swallowed.
<b>Early onset symptoms related to exposure</b>	Dusts may irritate the respiratory tract, skin and eyes. May cause an allergic skin reaction. Dermatitis. Rash.
<b>Delayed health effects from exposure</b>	Not available.
<b>Acute toxicity</b>	Based on available data, the classification criteria are not met.
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.
<b>Serious eye damage/irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Respiratory or skin sensitisation</b>	
<b>Respiratory sensitisation</b>	Not a respiratory sensitiser.
<b>Skin sensitisation</b>	May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	Not classified.
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.

### ACGIH Carcinogens

Permethrin (CAS 52645-53-1) A4 Not classifiable as a human carcinogen.

### IARC Monographs. Overall Evaluation of Carcinogenicity

Permethrin (CAS 52645-53-1) 3 Not classifiable as to carcinogenicity to humans.

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

## Section 12 - Ecological information

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

Components	Species	Test Results
Permethrin (CAS 52645-53-1)		
<b>Aquatic</b>		
<i>Acute</i>		
Crustacea	EC50 Water flea ( <i>Daphnia magna</i> )	0.0006 - 0.0025 mg/l, 48 hours
Fish	LC50 Channel catfish ( <i>Ictalurus punctatus</i> )	0.0011 mg/l, 96 hours
<b>Persistence and degradability</b>	Active Ingredient (a.i.): Not rapidly biodegradable.	
<b>Bioaccumulative potential</b>		

**Partition coefficient  
n-octanol / water (log Kow)**

Permethrin 6.15

**Mobility in soil** No data available for this product.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### Section 13 - Disposal considerations

**Disposal methods** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Residual waste** Dispose of in accordance with all applicable regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### Section 14 - Transport information

#### ADG

**UN number** 1479

**UN proper shipping name** OXIDISING SOLID, N.O.S. (Potassium chlorate)

**Transport hazard class(es)**

**Class** 5.1

**Subsidiary risk** -

**Packing group** III

**Environmental hazards** No

**Hazchem code** 1Y

**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

#### RID

**UN number** 1479

**UN proper shipping name** OXIDIZING SOLID, N.O.S. (Potassium chlorate)

**Transport hazard class(es)**

**Class** 5.1

**Subsidiary risk** -

**Label(s)** 5.1

**Packing group** III

**Environmental hazards** Yes

**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

#### IATA

**UN number** 1479

**UN proper shipping name** Oxidizing solid, n.o.s. (Potassium Chlorate)

**Transport hazard class(es)**

**Class** 5.1

**Subsidiary risk** -

**Packing group** III

**Environmental hazards** No

**ERG Code** 5L

**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**Other information**

**Passenger and cargo aircraft** Allowed with restrictions.

**Cargo aircraft only** Allowed with restrictions.

#### IMDG

**UN number** 1479

**UN proper shipping name** OXIDIZING SOLID, N.O.S. (Potassium Chlorate), MARINE POLLUTANT

**Transport hazard class(es)**

**Class** 5.1

**Subsidiary risk** -

**Packing group** III

**Environmental hazards**

**Marine pollutant** Yes

EmS

F-A, S-Q

**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

**ADG**



IATA; IMDG; RID



Marine pollutant



**General information**

IMDG Regulated Marine Pollutant.

According to the ADG code, this product can be shipped as limited quantity if the inner packaging is less than 5 kg, and the total gross weight is less than 30 kg.

## Section 15 - Regulatory information

### Safety, health and environmental regulations

#### National regulations

This Safety Data Sheet was prepared in accordance with Australia Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals.

Poison Schedule: S5  
Signal Word CAUTION

#### Australia Medicines & Poisons Appendix E

Potassium chlorate (CAS 3811-04-9)

#### Australia Medicines & Poisons Schedule 2

Permethrin (CAS 52645-53-1)

Potassium chlorate (CAS 3811-04-9)

#### Australia Medicines & Poisons Schedule 4

Permethrin (CAS 52645-53-1)

#### Australia Medicines & Poisons Schedule 5

Permethrin (CAS 52645-53-1)

Potassium chlorate (CAS 3811-04-9)

#### Australia Medicines & Poisons Schedule 6

Permethrin (CAS 52645-53-1)

**Australia National Pollutant Inventory (NPI): Threshold quantity**

Potassium chlorate (CAS 3811-04-9) 10 tonnes/yr Threshold Category: 1

**High Volume Industrial Chemicals (HVIC)**

Talc (Mg<sub>3</sub>H<sub>2</sub>(SiO<sub>3</sub>)<sub>4</sub>) (CAS 14807-96-6) 1000 - 9999 TONNES See the regulation for additional information.

**Importation of Ozone Depleting Substances (Customs(Prohibited imports) Regulations 1956, Schedule 10, as amended)**

Not listed.

**National Pollutant Inventory (NPI) substance reporting list**

Talc (Mg<sub>3</sub>H<sub>2</sub>(SiO<sub>3</sub>)<sub>4</sub>) (CAS 14807-96-6) 2000 tonnes/yr Threshold Category: 2B  
400 tonnes/yr Threshold Category: 2A

**Prohibited Carcinogenic Substances**

Not regulated.

**Prohibited Substances (National Model Regulation for the control of Workplace Hazardous Substances, Schedule 2 NOHSC:1005 (1994) as amended)**

Not listed.

**Restricted Carcinogenic Substances**

Not regulated.

**Restricted Importation of Organochlorine Chemicals (Customs(Prohibited Imports) Regulations 1956, Schedule 9)**

Not listed.

**International regulations****Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Kyoto Protocol**

Not applicable.

**Montreal Protocol**

Not applicable.

**Basel Convention**

Not applicable.

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**Section 16 - Any other relevant information**

**Issue date** 13-July-2023

**Revision date** 13-July-2023

**Key abbreviations or acronyms used** AICIS: Australian Inventory of Industrial Chemicals.

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