

### 1: Identification of the Substance and Supplier

<b>Product Name</b>	<b>GRAINMASTER SUPERSMOKE</b>
<b>Recommended Use</b>	Insecticidal Smoke Generator
<b>Suppliers Details</b>	Orion AgriScience Ltd Unit 1, 15 Sir Gil Simpson Drive, Harewood, Christchurch, 8053 PO Box 39 071, Harewood, Christchurch, 8545
<b>Web Address</b>	www.orionagriscience.co.nz
<b>Email Address</b>	orders@orionagriscience.co.nz
<b>Telephone Number</b>	(03) 928 2386 (office hours), 0800 674 6627 (free phone)
<b>Emergency Telephone</b>	0800 CHEMCALL (0800 243 622) (24 hours)
<b>National Poison Centre</b>	0800 POISON (0800 764 766) (24 hours)
<b>Date of Issue/Revision</b>	July 2020

### 2: Hazards Identification

#### Hazard Pictograms



#### Signal Words

##### Hazard Classes:

- 6.1D Acute Toxicity (Oral Cat. 4)
- 6.3B Skin Irritation (Cat. 3)
- 6.4A Eye Irritation (Cat. 2)
- 6.8B Reproductive Toxicity (Cat. 2)
- 6.9A Target Organ Systemic Toxicity (Oral Cat. 1)
- 6.9B Target Organ Systemic Toxicity (Inhalation Cat. 2)
- 9.1A Aquatic Ecotoxicity (Cat. 1)
- 9.2D Soil Ecotoxicity
- 9.3B Terrestrial Vertebrate Ecotoxicity
- 9.4A Terrestrial Invertebrate Ecotoxicity

##### Precautionary Statements:

Prevention

Response

#### Danger

##### Hazard Statements:

- H302 Harmful if swallowed
- H316 Causes mild skin irritation
- H319 Causes serious eye irritation
- H361 Suspected of damaging fertility or the unborn child
- H372 Causes damage to organs through prolonged or repeated exposure
- H373 May cause damage to organs through prolonged or repeated exposure
- H410 Very toxic to aquatic life with long lasting effects
- Harmful to the soil environment
- Toxic to terrestrial vertebrates
- Very toxic to terrestrial invertebrates

- P101 If medical advice is needed, have product container or label at hand
- P102 Keep out of reach of children
- P103 Read carefully and follow all instructions
- P264 Wash hands thoroughly after handling
- P270 Do not eat, drink or smoke when using this product
- P203 Obtain, read and follow all safety instructions before use
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P260 Do not breathe dust/fume/gas/mist/vapours/spray
- Read label before use. Avoid contact with eyes and skin. Do not breathe in the smoke or dust. When using, wear personal protection as described in section 8. Refer to further directions in sections 7 and 15. Take all reasonable steps to ensure that this product does not cause any significant adverse effects to the environment beyond the application area. Do not apply directly into or onto water.
- P301+P317 IF SWALLOWED: Get medical help
- P330 Rinse mouth
- P332+P317 If skin irritation occurs get medical advice

	<p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing</p> <p>P337+P317 If eye irritation persists: Get medical help</p> <p>P318 If exposed or concerned, get medical advice</p> <p>P308+P316 If exposed or concerned: Get emergency medical help immediately</p> <p>P321 Specific treatment (refer to section 4)</p> <p>P319 Get medical help if you feel unwell</p> <p>P391 Collect spillage</p> <p>First aid measures described in section 4. Contain and collect spillage for disposal. In an emergency call 111, Police or Fire Brigade. For specialist advice in an emergency only, call 0800 CHEMCALL (0800 243 6225) (24 hrs).</p>
Storage	P405 Store locked up
Disposal	Keep out of reach of children. P501 Dispose of contents by using it in accordance with this label. Dispose of the container via AgRecovery after triple rinsing (use the rinsate for spraying).

### 3: Composition/ Information on Ingredients

Ingredient	CAS No	Content (% w/w)
Pirimiphos-methyl (active ingredient)	29232-93-7	10
Deltamethrin (active ingredient)	52918-63-5	5
Potassium chlorate	3811-04-9	10 - 30
Talc	14807-96-6	30 - 60
Other ingredients	Proprietary	Remainder

### 4: First Aid Measures

If medical advice is needed, have product container or label at hand. For advice call the National Poisons Centre or a Doctor

<b>Ingestion:</b>	Rinse mouth. Seek medical advice
<b>Skin Contact:</b>	In case of contact with canister contents, wash with plenty of soap and water. Seek medical advice if irritation occurs, or if feeling unwell
<b>Eye Contact:</b>	In case of contact with canister contents, rinse eyes cautiously with water for several minutes. Remove contact lenses, if easy to do so. Continue rinsing. Seek medical advice if irritation persists.
<b>Inhalation:</b>	In case of inhalation of smoke or canister contents, remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice if feeling unwell.
<b>Workplace Facilities:</b>	Hand wash facility. Eye wash facility
<b>Advice to Doctor:</b>	Pirimiphos-methyl is an organophosphate insecticide, which inhibits cholinesterase activity, and interferes in nerve pulse transmission. On set of symptoms may be delayed for several hours. Atropine is the specific antidote and may be given immediately by qualified staff, at a level of 2 - 5mg (intravenously or intramuscularly), every 20 minutes until atropinisation occurs. Considerable amounts of atropine may be necessary. Atropine must NOT be given to cyanosed patients; administer oxygen first. Do NOT use opiates or barbiturates. If convulsions occur, administer diazepam (10mg intravenously). Take venous blood sample for determination of blood cholinesterase activity. Cholinesterase reactivators (Pralidoxime) should, if possible, be given at the same time as atropine. They are not effective after 24 hours post exposure and are not substitutes for atropine. Pralidoxime should be administered at: Mild poisoning: 1g in 2 - 3ml water (intramuscularly), Severe poisoning: 2g in 30ml water (intravenously). Following ingestion, adsorbents such as charcoal may be of value.
<b>National Poison Centre</b>	0800 POISON (0800 764 766) (24 hours)

Symptoms of Exposure which could occur if this material is not handled in accordance with instructions:

<b>Ingestion:</b>	Excessive sweating, salivation, headache, weakness, faintness, nausea, diarrhoea, small pupils, blurred vision, muscle twitching, numbness of tongue and lips
<b>Skin Contact:</b>	Irritation, numbness, tingling

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<b>Eye Contact:</b>	Irritation. May cause constriction of the pupil.
<b>Inhalation:</b>	May cause irritation. Can be absorbed via the lungs (see symptoms under 'swallowed' above)
<b>Note: Symptoms may be delayed for up to 24 hours or more following exposure</b>	

### 5: Fire-Fighting Measures

<b>Fire/Explosion Hazard</b>	Highly combustible material. Ignites readily. Contains an oxidiser (potassium chlorate). As with many dusts, an explosive air/dust mixture may be formed if rough handling liberates dust in enclosed or poorly ventilated areas
<b>HAZCHEM Code</b>	2Z
<b>ERP Guide No</b>	47
<b>Extinguishing Media</b>	Water spray, foam, dry chemical or CO2. Avoid water jet.
<b>Fire Fighting Instructions</b>	During a fire, toxic fumes may be emitted. Wear self-contained breathing apparatus. Contain runoff.
<b>Specific Hazards Arising from Fire</b>	No data available

### 6: Accidental Release Measures

<b>Personal Precautions</b>	Wear protective clothing as described in section 8. Do not inhale smoke or dust. Exclude non-essential people from the area.
<b>Environmental Precautions</b>	Prevent further spillage or leakage. Prevent material from entering drains, waterways, etc.
<b>Clean Up</b>	Keep bystanders away. If canisters have spilled contents, wear chemical resistant gloves (PVC, nitrile or neoprene). Do not inhale dust. Moisten to prevent dusting, and carefully sweep up. If dust is generated, wear a respirator (particulate matter). Place spilled product in a sealable container. Dispose of to a suitable landfill.

### 7: Handling and Storage

<b>Storage:</b>	Keep out of reach of children. Store in the original tightly closed container in a secure area.
<b>Handling and Use:</b>	Keep out of reach of children. Avoid contact with eyes and skin. Avoid inhalation of dust or smoke. Wear protective clothing as described in section 8. Do not eat, drink or smoke while using. Evacuate all people and animals. Secure the treatment area, and display a warning notice at each entry point. Do not use in flammable or explosive environments. When igniting, do not place on combustible surfaces, or near to combustible materials. Keep exit door open whilst generators are being lit, and close on exiting treatment area. Close all other doors, ventilators, etc. before treatment. Keep persons and animals out of treated areas while treating, and for the duration of the REI. Ventilate thoroughly before re-entry. Wear gloves when handling used canisters. For use in grain stores or silos only. Do not use where food is exposed, or where dairy or meat products are processed, packed or stored. Refer to section 15 for additional information
<b>REI</b>	24 hours closed silo followed by 3 hours ventilation

### 8: Exposure Controls / Personal Protection

<b>Tolerable Exposure Limit</b>	None established
<b>Workplace Exposure Standards</b>	Talc 2 mg/m <sup>3</sup> respirable dust
<b>Engineering Controls</b>	Not applicable
<b>Biological Monitoring</b>	Regular users should undergo biological monitoring of cholinesterase activity. Consult with your GP or Occupational Health Adviser.
<b>Personal Protection:</b>	
<b>Eye</b>	Safety glasses/goggles when igniting
<b>Skin</b>	Cotton overalls snugly fitting at the neck, wrist and ankle, and boots. Wear gloves (barrier multilayer, nitrile, neoprene) when handling the used canister.
<b>Respiratory</b>	Not required where smoke is not inhaled. If smoke is or could be inhaled, or where entering treated area

within the REI, a respirator (organic vapour and particulate matter) is required

Clean protective equipment after use

### 9: Physical and Chemical Properties

<b>Appearance</b>	Grey/Off white powder in aluminium canister
<b>Odour</b>	Pungent
<b>Odour Threshold</b>	No data available
<b>pH</b>	Not applicable
<b>Melting Point/Freezing Point</b>	No data available
<b>Boiling Point</b>	No data available
<b>Flash Point</b>	Not applicable
<b>Flammability</b>	Not flammable
<b>Upper/Lower Flammability Limits</b>	Not available. As with many dusts, an explosive air/dust mixture may be formed if rough handling liberates dust in enclosed or poorly ventilated areas
<b>Vapour Pressure</b>	No data available
<b>Vapour Density</b>	No data available
<b>Relative Density</b>	No data available
<b>Solubility in Water</b>	Insoluble
<b>Partition Coefficient: n-octanol/water</b>	See section 12
<b>Auto ignition Temperature</b>	450 - 500°C
<b>Decomposition Temperature</b>	No data available
<b>Kinematic Viscosity</b>	No data available

### 10: Stability and Reactivity

<b>Stability</b>	Stable under normal conditions
<b>Hazardous Reactions</b>	Oxidizer (contains Potassium chlorate)
<b>Incompatibility</b>	Avoid mixing with any combustible materials
<b>Hazardous Decomposition Products</b>	None Known

### 11: Toxicological Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet and label instructions

<b>Acute Oral Toxicity</b>	LD50 > 300 mg/kg
<b>Acute Dermal Toxicity</b>	LD50 > 5000 mg/kg
<b>Acute Inhalation Toxicity</b>	LD50 > 5 mg/L
<b>Skin Irritant/Corrosive</b>	Irritation
<b>Eye Irritant/Corrosive</b>	Irritation
<b>Sensitisation Effects</b>	None
<b>Mutagenic Effects</b>	None
<b>Carcinogenic Effects</b>	None
<b>Reproductive Effects</b>	Pirimiphos methyl is a suspected human reproductive or developmental toxin
<b>Specific Organ Toxicity</b>	Pirimiphos-methyl and deltamethrin are nervous system toxins. Pirimiphos-methyl interferes with cholinesterase, an enzyme essential for the correct functioning of the nervous system. In animal studies, repeated inhalation of deltamethrin was found to cause agitation, hypersensitivity, impaired locomotor activity, and reduced weight gain.

### 12: Ecological Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet and label instructions

The following information is presented in respect of the active ingredient:

<b>Ecotoxicity</b>	<b>Pirimiphos-methyl</b>
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- Acute Oral LD50 (Bobwhite quail) 40 mg/kg
- LC50 (96 hr) (Rainbow trout) 0.64 mg/l
- LC50 (48 hr) (Daphnia) 0.21 µg/l
- Algae EC50 1.0 mg/l
- Very toxic to bees

### Deltamethrin

- Acute Oral LD50 (Rat) 31 mg/kg
- LC50 (96 hr) (Rainbow trout) 0.25 µg/l
- EC50 (48 hr) (Daphnia) 0.56 µg/l
- Algae EC50 (72 hr) 9.1 mg/l
- Very toxic to bees

<b>Persistence/degradability</b>	Biodegradable. DT50 (soil) 39 days (typical) (Pirimiphos-methyl)	
	Biodegradable. DT50 (soil) 58 days (typical) (Deltamethrin)	
<b>Bioaccumulative Potential</b>	Octanol-water partition coefficient	LogP = 4.2 (high) (Pirimiphos-methyl)
		LogP = 4.6 (high) (Deltamethrin)
<b>Soil Mobility</b>	Soil organic carbon water partitioning coefficient	Koc = 1100 (slightly-mobile) (Pirimiphos-methyl)
		Koc = 10240000 (non-mobile) (Deltamethrin)
<b>Environmental Exposure Limit:</b>	None established	

### 13: Disposal Considerations

<b>Product</b>	Dispose of product by using it in accordance with the label. Waste product should be disposed of to a suitable landfill. For disposal of large quantities contact Orion AgriScience Ltd.
<b>Container</b>	Dispose of to a suitable landfill. Do not burn. Do not use packaging for any other purpose.

### 14: Transport Information

<b>Dangerous Goods</b>	
<b>UN Number</b>	3077
<b>Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (PIRIMIPHOS-METHYL 10%, DELTAMETHRIN 5%)
<b>Class</b>	9
<b>Subsidiary Class</b>	None
<b>Packing Group</b>	III
<b>Additional Information</b>	MARINE POLLUTANT
<b>MTQ (Non-Commercial)</b>	1000 Kg
<b>Passenger Service Vehicle</b>	No restriction

### 15 Regulatory Information

<b>EPA Approval No</b>	HSR101001
<b>ACVM Registration No</b>	Not applicable
<b>Qualified Person</b>	Required
<b>Certified Handler</b>	Not required
<b>Workplace Only</b>	No
<b>Tracking</b>	Not required
<b>Record Keeping</b>	Not required (unless > 3 Kg applied within 24 hours, and which is likely to leave the application area)
<b>Site Requirements under EPA Notice and HSWHS Regs:</b>	<ul style="list-style-type: none"> <li>• A hazardous substance location compliance certificate is not required</li> <li>• A hazardous area is not required</li> <li>• Separation distances for class 3 and class 6 substances to protected places and public places is</li> </ul>

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not applicable

- Fire extinguishers are not required
- Signage is required for more than 100 Kg
- An emergency response plan is required for more than 100 Kg
- Secondary containment is not required
- Segregation from incompatible substances is not required

### Use Directions

The intended exit door of a grain store/silo must remain open until the operator has left the grain store/silo after ignition of the generator. All openings including doors and vents (except for the exit door), must be closed prior to ignition of the generator. The generator is not to be ignited while any person other than the operator is present in the grain store/silo. The exit door must be closed after (i) ignition of the generator; (ii) the operator has exited the grain store/silo; and (iii) no other person is present in the grain store/silo.

### Use Restrictions

This product is for use in grain stores and grain silos only. Other uses are not permitted.

### Signage

Signs must be posted at every access point to the treatment area stating an application is being carried out using a substance that is toxic to people; access is not permitted unless appropriate protective equipment is worn; details of the required protective equipment required to be worn for entry, the person in charge; the date of the application; and the time/date of the expiry of the REI. Signs must be removed within 72 hours of the end of the REI.

### Additional Requirements

Refer to NZS 8409:2004 'Management of Agrichemicals', and relevant local and regional council plans

## 16: Other Information

Glossary	
<b>ADE</b>	Acceptable Daily Exposure – A daily dose, received via any route, below which no adverse effects are expected over a lifetime of exposure
<b>ACVM</b>	Agricultural Compounds and Veterinary Medicines group of the Ministry of Primary Industries
<b>Cat.</b>	GHS category
<b>Ceiling</b>	A concentration that should not be exceeded at any time during any part of the working day
<b>Certified Handler</b>	A qualification issued by a Compliance Certifier to handle and use particularly toxic substances (6.1A and 6.1B)
<b>DT50</b>	Time (days) for 50% reduction in concentration
<b>EC50</b>	Concentration required to produce an effect in 50% of organisms
<b>Environmental Exposure Limit</b>	Maximum concentration limit of a substance in an environmental medium, e.g., water, soil.
<b>EPA Notice</b>	Hazardous Property Controls Notice 2017
<b>ERP Guide</b>	Dangerous Goods – Initial Emergency Response Guide SNZ HB 76:2008
<b>GHS</b>	Globally harmonized system of classification and labelling of chemicals
<b>Hazardous Substance Location</b>	For locations storing hazard substances of certain classes above threshold quantities
<b>Compliance Certificate</b>	
<b>Hazardous Area</b>	A designated area designed for the presence of flammable substances - Refer AS/NZS 60079.10.1:2009
<b>HAZCHEM Code</b>	Emergency action code for emergency services
<b>HSWHS Regs</b>	Health and Safety at Work (Hazardous Substances) Regulations 2017
<b>LC50</b>	Concentration that will kill 50% of organisms
<b>LD50</b>	Dose that will kill 50% of organisms
<b>MTQ</b>	Maximum Transport Quantity. The maximum amount of dangerous goods that can be transported by road by the user
<b>Notification</b>	Advance notice given to neighbours and other affected parties, of details of proposed application, and other details as described
<b>Octanol-Water Partition Coefficient</b>	The partition coefficient of a substance between n-octanol and water, used as the Logarithm base 10 form, as an indicator that a substance may bioaccumulate

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<b>PDE</b>	Permitted Daily Exposure - A daily dose below which no adverse effects are expected over a lifetime of exposure
<b>Protected Place</b>	Residential properties, schools, hospitals, kindys, factories, shops, warehouses, etc., and other places where people assemble
<b>Public Place</b>	A place frequented by the public, including roads (does not include private property)
<b>Qualified Person</b>	A requirement for the loader, contractor or person applying the product to hold a qualification such as a GROWSAFE Certificate, Unit Standard 21563, etc.
<b>Record Keeping</b>	Includes a spray diary or other record of application
<b>REI</b>	Restricted Entry Interval – The length of time after application before entry into the treated area is permitted without the use of protective equipment. For indoor environments, this time period commences once ventilation after treatment begins.
<b>Segregation</b>	Certain classes of substances must not be in contact with, and must be stored separately from, certain other classes as specified in HSWHS Regs
<b>Separation Distances</b>	The distances specified in Part 11 and Part 13 of HSWHS Regs between storage and/or use of hazardous substances and protected places and/or public places
<b>Signage</b>	Positioned at entrances to commercial premises providing information on the hazardous substances present
<b>Soil Adsorption Coefficient (Kd)</b>	The ratio of the concentrations of a substance adsorbed onto a solid sorbent to that dissolved in a liquid phase. The higher the value the less mobile the chemical is in soil
<b>Soil Organic Carbon-Water Partitioning Coefficient (Koc)</b>	The ratio of the mass of a chemical that is adsorbed in the soil per unit mass of organic carbon in the soil. The higher the value the less mobile the chemical is in soil
<b>STEL</b>	Short term exposure level – 15 minute time weighted average
<b>Tolerable Exposure Limit</b>	Maximum concentration limit of a substance above which persons must not be exposed
<b>Tracking</b>	For some particularly hazardous substances, a record must be kept of the transport, storage, sale and use of the product
<b>TWA</b>	Time weighted average calculated over an 8 hour working day
<b>Workplace Exposure Standard</b>	An occupational health standard limiting concentrations of specified substances to which persons are exposed
<b>Workplace Only</b>	A product that is restricted to a workplace only and under the supervision of a certified handler

### Please Note

Users must ensure that the most up to date version of this safety data sheet is used.

This Safety Data Sheet summarises information on this product, and how to safely handle and use the product. Each user should familiarise themselves with the product label and Safety Data Sheet, and consider the information in the context of how the product will be handled and used, including in conjunction with other products. Orion AgriScience Ltd assumes no responsibility for the accuracy, completeness or suitability of this information. The user is responsible for determining the suitability and accuracy of this information for their particular purposes.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.