

**BUGMASTER® FLOWABLE INSECTICIDE**

Date of Issue: December 2016

**1. IDENTIFICATION**

**Product Identifier:** **Bugmaster® Flowable Insecticide**




**Other Means of Identification:** Carbaryl (an anti-cholinesterase compound)  
Carbamate (chemical family)

**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 Vic 3129 Australia  
(03) 9899 8100  
[www.agnova.com.au](http://www.agnova.com.au)

**Emergency Phone Number:** 1800 033 111 (24 hrs)  
Poison Information Centre 13 11 26

**2. HAZARD(S) IDENTIFICATION**
**GHS Classification of the Substance or Mixture**

Pictogram	Hazard Statements	Precautionary Statements
	Suspected of causing cancer. May damage fertility or the unborn child.	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. If exposed or concerned: Get medical advice. Store locked up. Dispose of contents in accordance with local and State regulations.
	Harmful if swallowed.	Wash thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Call a POISON CENTER if you feel unwell. Rinse mouth.
	Very toxic to aquatic life.	Avoid release to the environment. Collect spillage.

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**Signal Word:** Warning

**Hazard-Determining Components of Labelling:** Carbaryl (ISO)

**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:** Schedule 6  
(Standard for Uniform Scheduling of Medicines and Poisons)

**3. COMPOSITION AND INFORMATION ON INGREDIENTS**

Ingredients:	CAS Number:	Concentration (% w/w):
Carbaryl (1-naphthyl methyl carbamate)	63-25-2	43
Propylene Glycol (1,2-propanediol)	57-55-6	5

**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:**

**Ingestion:** Call Poisons Information Centre (131126) or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by Poisons Information Centre or a doctor. Do not give anything by mouth to an unconscious person

**Inhalation:** Remove to fresh air. Apply artificial respiration if necessary. Get medical help if breathing difficulty persists.

**Skin Contact:** Remove contaminated clothing and wash skin thoroughly with soap and water. Obtain medical attention if irritation persists. Wash clothing before re-use.

**Eye Contact:** Immediately flush eyes with water for 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. If irritation persists, see a doctor.

**First Aid Facilities:** Provide washing facilities in the workplace.

**Symptoms Caused by Exposure:** No data available

**Medical Attention and Special Treatment:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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**Note to Physician:** Carbaryl contains an N-methyl carbamate that inhibits cholinesterase. Drugs like 2-Pam (pyridine-2-aldoxime methiodide) are not recommended. To aid in the confirmation of diagnosis, urine samples should be obtained within 24 hours of exposure and immediately frozen. Analysis will be arranged by Tessenderlo Kerley, Inc. Consultation on therapy can be obtained at all hours by calling the Poisons Information Centre (Phone 13 11 26).

**5. FIRE FIGHTING MEASURES**

**Suitable Extinguishing Equipment:** Carbon dioxide, dry chemical or water spray. Fight larger fires with water spray.

**Specific Hazards Arising from the Chemical:** Keep containers/storage vessels in fire area cooled with water spray  
In case of fire, the following can be released:  
Nitrogen oxides (NOx)  
Carbon dioxide

**Special Protective Equipment and Precautions for Fire Fighters:** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.  
Contain run-off.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures:** Not required.  
Uncontrolled release should be responded to by trained personnel using pre-planned procedures. Evacuate area. Evacuate personnel to a safe area.  
Keep people at a distance and stay upwind.

**Environmental Precautions:** Inform respective authorities in case of seepage into water course or sewage system.  
Dilute with plenty of water.  
Do NOT flush to drains or sewers. Do NOT contaminate streams, rivers or water courses.

**Methods and Materials for** Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).

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**Containment and Cleaning Up:** Sweep up small spills and place in a suitable container for recovery or disposal. Dispose contaminated material as waste according to section 13.  
 Ensure adequate ventilation.  
 Empty containers and product should not be burnt.  
 Keep spills and cleaning run-off out of drains or sewers and open bodies of water.

<b>7. HANDLING AND STORAGE</b>
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**Precautions for Safe Handling:** Ensure good ventilation/exhaustion at the workplace.  
 Avoid prolonged or repeated exposure.  
 Refer to the product label for further information.

**Conditions for Safe Storage, including any Incompatibilities:** Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Keep away from food and drink. Ensure containers are correctly labelled and securely sealed. Do not store in areas where temperatures frequently exceed 38°C.  
 Combustible liquid (Class C1)

<b>8. EXPOSURE CONTROLS AND PERSONAL PROTECTION</b>
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Personnel who handle this product in its end-use application should use this product in accordance with its pesticide labelling.

<b>Exposure Standards:</b>	<b>Chemical</b>	<b>OSHA PEL/TWA</b>	<b>ACGIH TWA/STEL</b>	<b>NIOSH REL</b>
	Carbaryl	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>
	Ethanol	1,000 ppm	1,000 ppm	1,000 ppm

**Biological Monitoring:** No data available

**Engineering Controls:** Good ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operators.

**Individual Protection Measures, for example, Personal Protective Equipment (PPE):** Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing.  
 Wash hands before breaks and at the end of work.  
 Store protective clothing separately.

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*Hand and Skin Protection for use in situations where PPE is required to minimise exposure:*

Wear butyl rubber, natural rubber, nitrile rubber, or neoprene gloves. Wear long-sleeved shirt and long pants, waterproof shoes and socks.

Wash contaminated clothing before reuse.

*Eye Protection for use in situations where PPE is required to minimise exposure:*

Wear tightly sealed goggles, face protection.

*Respiratory Protection if local ventilation is inadequate:*

Wear a NIOSH-approved dust/mist filtering respirator with NIOSH/MSHA approval number prefix TC-21C or a NIOSH-approved respirator with any N, R, P or HE filter.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	White to beige liquid suspension
<b>Odour:</b>	Mild
<b>Boiling Point:</b>	Not applicable
<b>Melting/Freezing Point:</b>	-3°C
<b>Evaporation Rate:</b>	Not determined
<b>Vapour Pressure:</b>	23.7 hPa @ 20 °C
<b>Vapour Density:</b>	0.62 g/cm <sup>3</sup> @ 20 °C
<b>Relative Density:</b>	Not determined
<b>Bulk Density:</b>	1.1 g/cm <sup>3</sup>
<b>Viscosity:</b>	Not determined
<b>pH:</b>	4.0 – 5.0
<b>Partition Coefficient: n-octanol/water:</b>	Not determined
<b>Flash Point:</b>	> 100 °C
<b>Flammability (explosive) Limits:</b>	Not determined
<b>Auto-Ignition Temperature:</b>	Product is not self-igniting
<b>Decomposition Temperature:</b>	175 - 190°C (exothermic decomposition)

**10. STABILITY AND REACTIVITY**

**Chemical Stability:** Stable under normal temperature and storage conditions.

**Possibility of Hazardous Reactions:** Will not occur

**Conditions to Avoid:** Heat, flame and ignition sources

**Incompatible Materials:** Strong acids; bases

**Hazardous Decomposition Products:** Carbon oxides, Nitrogen oxides, Methyl iso-cyanate (trace: no adverse effects expected)

**11. TOXICOLOGICAL INFORMATION****Technical Carbaryl****Acute Toxicity:**

**Oral Toxicity:** LD<sub>50</sub> Oral Rat = 699 mg/kg

**Dermal Toxicity:** LD<sub>50</sub> Dermal Rabbit = > 4000 mg/kg

**Inhalation Toxicity:** LC<sub>50</sub> Aerosol (4 hr inhalation) Rat = 3.84 mg/L

**Skin Corrosion/Irritation:** Mildly irritating

**Serious Eye Damage/Irritation:** Mildly irritating

**Respiratory or Skin Sensitisation:** No data available

**Germ Cell Mutagenicity:** No data available

**Carcinogenicity:** IARC - Carbaryl; overall evaluation = 3  
NTP - None of the ingredients is listed  
OSHA – None of the ingredients is listed.

**Reproductive Toxicity:** Carbaryl was not a reproductive toxicant in a 2-generation study in rats. Carbaryl was not a primary developmental

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toxicant in rats and rabbits. Developmental effects were observed in both species but were considered secondary to maternal toxicity.

<b>Neurotoxicity:</b>	Carbaryl caused transient neurobehavioral effects (e.g., tremors) related to cholinergic toxicity without correlating neuropathological changes in acute and sub chronic neurotoxicity studies in rats. Carbaryl did not cause developmental neurotoxic effects in offspring in a 1-generation study in rats.
<b>Mutagenicity:</b>	Carbaryl poses only a slight mutagenic risk based on the overall weight of evidence in a battery of in-vitro and vivo tests.
<b>Specific Target Organ Toxicity (STOT) – single exposure:</b>	No data available
<b>Specific Target Organ Toxicity (STOT) – repeated exposure:</b>	No data available
<b>Additional Toxicological Information:</b>	Reversible cholinesterase inhibition occurred in chronic toxicity studies in rats and dogs. The principle organs affected in rats from long term exposure to high doses of Carbaryl include the urinary bladder, thyroid, kidneys and liver. Carbaryl has been shown to cause tumour in lab animals in lifetime feeding studies

<b>12. ECOLOGICAL INFORMATION</b>
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**Technical Carbaryl**
**Ecotoxicity:**

**Aquatic Organisms:** Very toxic for aquatic organisms. DO NOT contaminate ponds, irrigation channels, drains, streams, rivers or waterways with the chemical or used containers.

**Fish Toxicity:** Acute 96 hour LC<sub>50</sub> (Rainbow trout *Oncorhynchus mykiss*) = 1.4 mg/L

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<b>Daphnia Toxicity:</b>	Acute 48 hour EC <sub>50</sub> = 0.00037 mg/L
<b>Bird Toxicity:</b>	Bobwhite quail LD <sub>50</sub> > 5000 mg/kg Mallard duck LC <sub>50</sub> > 5000 mg.kg
<b>Bee Toxicity:</b>	No data available
<b>Other:</b>	LC <sub>50</sub> earthworm ( <i>Eisenia foetida</i> ) > 1000 mg/kg
<b>Persistence and Degradability:</b>	Biodegradation under aerobic laboratory conditions is below detectable limits (BOD <sub>20</sub> or BOD <sub>28</sub> is < 2.5%). Biodegradation reached in Closed Bottle Test (OECD Test No. 301D) after 28 days is 1.2%.
<b>Bioaccumulative Potential:</b>	No data available
<b>Mobility in Soil:</b>	No data available
<b>Other Adverse Effects:</b>	Dangerous to drinking water if even extremely small quantities leak into the ground. Do not allow product to reach ground water, water course or sewage system, even in small quantities.

**13. DISPOSAL CONSIDERATIONS**

<b>Pesticide Disposal:</b>	Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
<b>Container Disposal:</b>	Triple or preferably pressure rinse containers before recycling or disposal. Add rinsings to spray tank. <i>Triple Rinse as follows:</i> Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. <i>Pressure Rinse as follows:</i> Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds.



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Drain for 10 seconds after the flow begins to drip.  
 If recycling or returning for re-use, replace cap and return rinsed clean containers to recycler, designated collection or refilling point. If not recycling or returning for re-use, break, crush, or puncture rinsed container and deliver empty packaging for appropriate disposal to drumMuster, an approved recycling program or accredited waste management facility.  
 Containers and their product must not be burnt.  
 Do not re-use empty containers for any other purpose.  
 Do not dispose of undiluted chemicals on site. Excess and unwanted chemicals should be registered for collection through the national ChemClear® or equivalent collection and disposal program.

<b>14. TRANSPORT INFORMATION</b>
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<b>Transport Classification:</b>	<p><b>Road and Rail Transport:</b> Not dangerous goods under the ADG7 when being transported in IBCs or other receptacles &lt;500 L (kg), (Special Provision AU01).</p> <p><b>Marine and Air:</b> Classified as Dangerous Goods for transport by sea and air according to the criteria of the UN Model Regulations for Transport of Dangerous Goods 13<sup>th</sup> Edition</p>
<b>UN Number:</b>	<b>3082</b>
<b>Proper Shipping Name or Technical Name:</b>	ENVIRONMENTALLY HAZARDOUS LIQUID, N.O.S. (Contains Carbaryl)
<b>Transport Hazard Class:</b>	9
<b>Packing Group:</b>	III
<b>Environmental Hazards for Transport Purposes:</b>	<p>Marine Pollutant                      Special marking (ADR): Symbols (fish and tree)                      Special marking (IATA): Symbols (fish and tree)</p> <p>Non-bulk packaging (max capacity of 450 L or less for liquids or 400 kg or less for solids) transported by motor vehicle, rail car or aircraft are excepted from all Marine Pollutants regulations and therefore treated as non-hazardous material. All bulk shipments or any shipment transported partially or entirely by vessel are treated as regulated Marine Pollutants and are shipped according to the requirements listed above.</p>

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**Special Precautions for User:** Not applicable**Additional Information:** None available**Hazchem Code:** 2X**15. REGULATORY INFORMATION****APVMA** Registered according to the Agricultural and Veterinary Chemicals Act 1988.  
APVMA Product Number: 40146**SUSMP** Schedule 6**16. OTHER INFORMATION****Trademark Information:** Bugmaster® is a registered trademark of Tessenderlo Kerley, Inc.**Abbreviations and Acronyms:** ADG7 – Australian Dangerous Goods Code for Road and Rail Transport, 7<sup>th</sup> Edition  
APVMA – Australian Pesticides and Veterinary Medicines Authority  
GHS – Globally Harmonized System of Classification and Labelling of Chemicals  
IARC – International Agency for Research on Cancer  
NTP – National Toxicology Program  
OSHA – Occupational Safety & Health Administration  
SUSMP – Standard for the Uniform Scheduling of Medicines and Poisons**Date of Preparation or Revision:** December 2016**Reason for Revision:** To comply with GHS**Data Sources:** Manufacturer product safety data 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.

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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