

Safety Data Sheet – Bug Juice

1. IDENTIFICATION

Product Name: Bug Juice
Other Names: 4.75% Deltamethrin
Recommended Use: Insecticide
Manufacturer: Renovo Technologies Ltd
Address: 4 Swans Rd, New Plymouth, New Zealand
Telephone: +64 6 9273025
Emergency Phone: +64 273264539
National Poisons Centre: 0800 764 766

2. HAZARDS IDENTIFICATION

Proposed Hazard Classification: 6.1D, 6.4A, 6.9B, 9.1A, 9.3B, 9.4A

Hazards: Harmful if swallowed.
May cause damage to the eyes
May cause damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.
Harmful to terrestrial vertebrates.
Very toxic to terrestrial invertebrates.

3. COMPOSITION: Information on Ingredients

Ingredient	CAS Number	Concentration (%w/w)
Deltamethrin	52918-63-5	4.75
1,2-benzisothiazol-3(2H)-one	2634-33-5	0.03
Propylene Glycol	57-55-6	<10.0
Balance – Proprietary ingredients of low hazard	Proprietary	To 100%

4. FIRST AID MEASURES

Consult the National Poisons Information Centre 0800 POISON (0800 764 766) or a doctor in every case of suspected chemical poisoning. Never give fluids or induce vomiting if a patient is unconscious or convulsing regardless of cause of injury. If breathing difficulties occur seek medical attention immediately.

Swallowed

If swallowed, do not induce vomiting. If conscious and alert, rinse mouth and drink 1-2 cupfuls of water. Begin artificial respiration if the victim is not breathing. Use mouth to nose rather than mouth to mouth. Obtain urgent medical attention.

Skin Contact

Immediately wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes and other contaminated leather articles such as belts and watchbands. Seek medical attention.

Eye Contact

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses if present and easy to do and continue rinsing. Do NOT allow victim to rub eyes or keep eyes closed. Obtain urgent medical attention.

Inhalation

Move the victim to fresh air immediately. Begin artificial respiration if breathing has stopped. Obtain medical attention immediately.

First Aid facilities

Provide eye baths and safety showers close to areas where exposure may occur.

Medical Attention

Treat symptomatically and supportively, monitoring the development of hypersensitivity reactions with respiratory distress. Gastric lavage may be indicated if ingested. No known antidote. Do not confuse with cholinesterase poisoning. Skin contacted may be carefully cleaned with cleansing milk. Symptoms can be partially alleviated by the

Safety Data Sheet – Bug Juice

application of a vitamin E or moisturising cream or anaesthetic ointment. For eyes, instil local anaesthetic drops e.g. 1% amethocaine hydrochloride eye drops. Give analgesics as necessary. In all cases consult the National Poisons Centre for the most up to date treatment information.

5. FIRE FIGHTING MEASURES

Shut off product that may 'fuel' a fire if safe to do so. Allow trained personnel to attend a fire in progress, providing fire fighters with this Safety Data Sheet. Prevent extinguishing media from escaping to drains and waterways.

Suitable extinguishing media

Water fog, fine spray, foam, dry chemical powder or carbon dioxide. Do not use water stream directly as this may spread fire or give a violent steam eruption. Cool fire exposed container with water spray.

Hazards from combustion products

Decomposition from combustion will emit acrid smoke and toxic fumes containing carbon oxides, nitrogen oxides, hydrogen bromide and hydrogen cyanide.

Precautions for fire fighters and special protective equipment

Full protective clothing with chemical goggles, butyl or neoprene gloves and self-contained breathing apparatus

Hazchem Code

3Z

Flash Point

>100 °C

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures

Prevent product from escaping to drains and waterways. Contain leaking packaging in a containment vessel or bunded area. Prevent any vapours or dust from building up in confined areas. Ensure that drain valves are closed at all times. Clean up minor spills immediately.

Methods and materials for containment for a major spill

Eliminate sources of ignition. Warn occupants of downwind areas of possible hazards. Keep the public away from the area. Prevent product from entering sewers, watercourses, or low-lying areas. Shut off the source of the spill if safe to do so. Advise relevant authorities if substance has entered a watercourse or sewer or has contaminated soil or vegetation. Take measures to minimise the effect on the groundwater. If possible recover product using a pump paying attention to flammability hazards or absorbent material. Collect and seal in properly labelled containers for disposal. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations. In all instances due consideration must be given for First Aid Measures (Section 4), PPE requirements (Section 8), Stability and Reactivity (Section 10) for this material.

7. HANDLING AND STORAGE

Precautions for safe handling

Keep out of reach of children. This product is volatile, potentially resulting in the creation of explosive mixtures with air. Keep containers closed. Avoid sources of ignition including smoking. Use only in well-ventilated areas. When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before reuse.

Conditions for safe storage

Store in a cool, dry place away from direct sunlight. Keep away from heat and ignition sources. Store in original containers. Protect from physical damage to prevent accidental release. Do not store with food, feedstuffs, fertilizers and seeds.

Incompatible materials

None known.

Fire Extinguisher Requirements

No specific requirements.

8. EXPOSURE CONTROLS: Personal Protection

Exposure Limits

No WES TEL or EEL has been set by EPA NZ for this product.

Safety Data Sheet – Bug Juice

Engineering Controls:

The use of local exhaust ventilation is recommended to control process emissions near the source. Sufficient ventilation should be provided to keep the solvent in air concentrations below any relevant exposure limit. Provide mechanical ventilation of confined spaces.

Hygiene Controls:

Facilities storing or utilising this material should be equipped with an eyewash facility, safety shower and facility for washing hands/face after work.

Personal Protective Equipment

Respiratory Protection: When handling this material it is recommended to use an approved respirator or half face mask complying with OSH and other relevant standards

Eye protection: Always use safety glasses or a chemical goggles when handling this product. Contact lenses may absorb and concentrate irritants, glasses are recommended.

Skin/ Body Protection: Always wear long sleeves and long trousers or coveralls, and enclosed footwear of safety boots when handling this product. It is recommended that chemical resistant gloves (eg nitrile, neoprene) be worn when handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White opaque liquid
Boiling Point (°C):	Approximately 100
Melting Point(°C):	Not applicable
Flash Point(°C):	>100
Lower Explosive Limit, LEL (%):	No data available
Upper Explosive Limit, UEL (%):	No data available
SG/ Density, 20 °C (g/mL):	1.00 – 1.05
Vapour Pressure, 20 °C (kPa):	No data available
Alkalinity/ acidity as pH:	4.5 – 6.0
Solubility in water:	Forms a suspension

The values listed are indicative of this product's physical and chemical properties. For a full product specification, please consult Renovo Technologies Ltd.

10. STABILITY AND REACTIVITY

Chemical stability

Stable at room temperature and pressure.

Hazardous decomposition products

Decomposition from combustion will emit acrid smoke and toxic fumes containing carbon oxides, nitrogen oxides, hydrogen bromide and hydrogen cyanide.

Specific Materials to Avoid

Strong acids, alkalis, oxidising agents, reducing agents and heat.

Hazardous Polymerisation

Not known to occur.

11. TOXICOLOGICAL INFORMATION

Acute Effects

Ingestion: Low - moderate toxicity if swallowed. Symptoms include burning sensations in the mouth, headache, dizziness, drowsiness, diarrhoea, nausea, vomiting, listlessness, stomach pain, muscular twitching or arms or legs.

Ingestion of small amounts is unlikely to cause permanent injury, however swallowing large quantities can result in confusion, convulsions, coma, seizures and death. Contact a doctor immediately

Eye Contact: The liquid may cause transient eye irritation. Avoid eye contact

Skin Contact: Contact with the skin, especially the face, may result in initial stinging or burning sensations (parasthesia) followed by numbing which may persist for a few hours. Avoid skin contact.

Inhalation: The vapour/mist is discomforting to the upper respiratory tract and lungs. Acute effects from inhalation of high vapour concentrations may cause effects similar to that of ingestion.

Safety Data Sheet – Bug Juice

Chronic Effects

Prolonged or repeated exposure may result in central nervous system effects such as tremors, uncoordination and disorientation. Persons with pre-existing conditions are advised to limit or avoid product contact.

Other Health Effects Information

Not Available.

Toxicological Information

Oral LD₅₀: 31 mg/kg (rat), deltamethrin active ingredient; 650 mg/kg (product, estimated)

Dermal LD₅₀: 700 mg/kg (rat), deltamethrin active ingredient; >5000 mg/kg (product, estimated)

Inhalation LC₅₀: 0.79 mg/L (rat), deltamethrin active ingredient; >10 mg/L (product, estimated)

12. ECOLOGICAL INFORMATION

Ecotoxicity

This product is highly toxic to the environment, with the potential to result in irreparable and irreversible effects. See hazard classifications in section 15 of this document. No specific ecological data available on this product.

Persistence/ Biodegradability: log P: 4.6. This substance (deltamethrin) is regarded as persistent and bioaccumulative by EPA NZ.

Mobility: This product is not readily soluble with water limiting its mobility in the environment. This product is likely to have low mobility in the environment and low leaching potential

Aquatic Toxicity:

Fish toxicity LC₅₀: 0.000017 mg/L; deltamethrin active ingredient

Daphnia Magna EC₅₀: 0.000017 mg/L; deltamethrin active ingredient

House Fly: 0.0125 µg/organism; deltamethrin active ingredient

13. DISPOSAL CONSIDERATIONS

Product Disposal

Dispose of product only by using according to label or using an approved waste disposal contractor. If this material as supplied becomes a waste care should be taken to ensure compliance with national and local authorities. It is the responsibility of the waste generator to determine the toxicity and physical properties of the waste generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Do not dispose of via municipal sewers, drains, natural streams or rivers

Packaging Disposal

Triple rinse container and add rinsate to the spray tank. Empty packaging should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. Care should be taken to ensure compliance with national and local authorities. Packaging may still contain product residue that may be harmful. Incinerate via approved incinerators or crush and bury in an approved landfill. Ensure that empty packaging is managed in accordance with Dangerous Goods and HSNO regulations.

14. TRANSPORT INFORMATION

UN No:	3082
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, NOS (contains deltamethrin)
DG Class:	9
Packing Group:	III
3Z	2X
Marine Pollutant:	YES

15. REGULATORY INFORMATION

Country/ Region: New Zealand

ACVM Approval Number: Not applicable

EPA NZ Approval Number: HSR100576

HSNO Classifications: 6.1D Acute Toxicity (Oral); 6.4A Eye Irritant, 6.9B Target Organ Toxicant; 9.1A

Safety Data Sheet – Bug Juice

Aquatic Ecotoxicant; 9.3B Ecotoxicant: Terrestrial Vertebrate; 9.4A Ecotoxicant Terrestrial Invertebrate

HSNO Controls:

Trigger Quantities for this Material:

- Certified Handler Test Certificate: Not Required
- Location Compliance Certificate: Not Required
- Hazardous Atmosphere Zone: Not Required
- Signage: 100 L
- Emergency Plan, Secondary Containment: 100L

The trigger quantities above must take into account any other hazardous substance that is present at that location. This represents a partial list of the controls for this material. Contact the supplier for a full list of HSNO controls.

16. OTHER INFORMATION

Reasons for Issue:

Update controls to comply with legislation

Abbreviations:

TWA - the highest allowable exposure concentration in an eight-hour day for a five-day working week

STEL - maximum allowable exposure concentration at any time

CAS Number: Chemical Abstracts Number

EPA NZ: Environmental Protection Authority New Zealand

HSNO: Hazardous Substances and New Organisms

References:

- Supplier Safety Data Sheets
- Hazardous Substances Databank
- EPA NZ Chemical Classification Information Database
- FOOTPRINT Pesticides Database
- Sax's Dangerous Properties of Industrial Materials, 11th Ed, 2007
- Synapse Chemlib Handbook of Solvents

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the suppliers knowledge. 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. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses, but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product. For further information, please contact Renovo Technologies Limited.