Renovo Technologies Ltd.
PO Box 3218, New Plymouth
Ph. 0800 002920
www.hawkeye.kiwi

Safety Data Sheet – Bug Juice

1. IDENTIFICATION

Product Name: Bug Juice
Other Names:
Recommended Use: Insecticide
Manufacturer: Renovo Technologies Ltd
Address: PO Box 3218, Fitzroy, New Plymouth 4312
Telephone: 0800 002920
Emergency Phone: 0800 CHEMCALL (0800 243 622)
National Poisons Centre: 0800 764 766

2. HAZARDS IDENTIFICATION

Signal Word: DANGER

Hazards:
Aquatic toxicity (acute/chronic) category 1
Hazardous to terrestrial vertebrates
Hazardous to terrestrial invertebrates

Hazard Phrases
Very toxic to aquatic life with long lasting effects.

Precautionary Phrases:
Read label before use.
Collect spillage.
Dispose of contents/container in accordance with local/regional/national/international regulations
Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area
Do not apply directly into or onto water
Do not apply substance to plants if bees are foraging; or the plants are in flower or part flower
Where surface coatings containing this substance have been applied the area must remain well ventilated until the surface coating is dry
The addition of the substance to surface coatings, and application of the surface coating MUST be carried out in well-ventilated areas.
Areas where surface coatings containing the substance have been applied MUST remain well-ventilated until the surface coating is dry.
The substance shall be applied by non-professionals by non-spray application methods only
The substance shall only be used as an additive to surface coatings

Pictograms:

3. COMPOSITION: Information on Ingredients

Ingredient	CAS Number	Concentration (%w/w)
Deltamethrin	52918-63-5	2.52
1,2-benzisothiazol-3(2H)-one	2634-33-5	<0.01
2-methyl-2H-isothiazol-3-one	2682-20-4	<0.01
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 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. 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 glovaes and self-contained breathing apparatus

Hazchem Code

2Z

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-ventillated 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.

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
Odour:	Characteristic odour
Odour Threshold:	No data available
Boiling Point (°C):	Approximately 100
Boiling Point Range	No data available
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
Vapour Density:	No data available
Alkalinity/ acidity as pH:	4.5 – 6.0
Solubility in water:	Forms a suspension
Partition Coefficient (Kow):	Log P 4.6 (deltamethrin active ingredient)
Auto-ignition Temperature (°C):	No data available
Decomposition Temperature (°C):	No data available
Kinematic Viscosity:	No data available

The values listed are indicative of this product's physical and chemical properties. Data is not available for any properties not listed above.

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 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 unlikey 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.
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 LD_{50}: 31 mg/kg (rat), deltamethrin active ingredient; approx 1200 mg/kg (product, estimated)
Dermal LD_{50}: 700 mg/kg (rat), deltamethrin active ingredient; >>5000 mg/kg (product, estimated)
Inhalation LC_{50}: 0.79 mg/L (rat), deltamethrin active ingredient; >>10 mg/L (product, estimated)

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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 persistant 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 LC_{50}: 0.000017 mg/L; deltamethrin active ingredient
Daphnia Magna EC_{50}: 0.0000017 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
Rinse container with paint and add to the paint can. Allow coating to dry on inside of pack. 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
Hazchem Code:	3Z
Marine Pollutant:	YES

15. REGULATORY INFORMATION

Country/ Region: New Zealand

ACVM Approval Number: Not applicable

EPA NZ Approval Number: HSR101700

HSNO Controls: Trigger Quantities for this Material:

- Certified Handler Test Certificate: Not Required
- Location Compliance Certificate: Not Required
- Hazardous Atmousphere 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.

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16. OTHER INFORMATION

Reasons for Issue:
New Formulation
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
- HSDB, Toxnet
- EPA NZ Chemical Classification Information Database
- PPDB Pesticides Database

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.