SECTION 1: Product and Company Identification

1.1. Product identifier

Trade name : Mectinite
Product code : EPA Reg. No. 74779-17

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/preparation : Insecticide

1.2.2. Uses advised against

No data available

1.3. Details of the supplier of the safety data sheet

Rainbow Treecare Scientific Advancements
11571 K-Tel Drive
Minnetonka, MN 55343
Phone: 1-(877) 272-6747 (toll free)
www.treecarescience.com

1.4. Emergency telephone number

Emergency number : (800)-424-9300 (CHEMTREC)
(800)-222-1222 (National Poison Information Center)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Classification of Mectinite

Hazard Class	Category	Hazard Statement
Acute Toxicity – Oral	4	H302
Eye Irritant	2	H319
Aquatic Toxicity -Chronic	2	H411

Full text of H-phrases: see table in "Label elements" below

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

GHS Labeling Elements

Hazard pictograms (CLP) :

GHS07

GHS09

Signal word : WARNING
Hazard statements : H302 – Harmful if swallowed

GHS Labeling Elements

H319 – Causes serious eye irritation
H411 –Toxic to aquatic life with long lasting effects

Precautionary statements (prevention) : P264 – Wash thoroughly after handling
P270 – Do not eat, drink or smoke when using this product
P280 – Wear eye protection/face protection
P273 – Avoid release to the environment

Precautionary statements (response) : P301+P312 – IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell
P330 – Rinse mouth
P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 – If eye irritation persists: Get medical advice or attention
P391 – Collect spillage

Precautionary statements (disposal) : P501 – Dispose of contents/container in accordance with federal, state and local regulations.

SECTION 3: Composition/information on ingredients

Name	Product identifier	%/wt.
Emamectin Benzoate	(CAS No.) 155569-91-8	4.0
Other Ingredients	NA	96.0

Contains 0.36 lb. Emamectin per gallon (43 g/L)

SECTION 4: First aid measures

4.1. Description of first aid measures

IF ON SKIN OR CLOTHING : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF IN EYES : Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call poison control center or doctor for treatment advice if irritation develops or persists.

IF SWALLOWED : Call a poison control center 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 a poison control center or doctor. Do not give anything to an unconscious person

IF INHALED : Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

First-aid measures – general : Early signs of intoxication include dilation of pupils, muscular incoordination, and muscular tremors. Vomiting within one-half hour of exposure can minimize toxicity following accidental ingestion of the product; rapidly after exposure (<15 minutes) administer repeatedly medical charcoal in a large quantity of water or ipecac.

If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate

supportive parenteral fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms, and measurements. In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since emamectin benzoate is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic emamectin benzoate exposure.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use dry chemical, foam or CO2 extinguishing media

Unsuitable extinguishing media : High volume water jet. (Water contamination risk from runoff)

5.2. Special hazards arising from the substance or mixture

Fire hazard : Toxic and irritating compounds may be released upon exposure to fire or intense heat

Explosion hazard : Product is not explosive.

Reactivity : The product is stable at normal handling- and storage conditions.

5.3. Advice for firefighters

Firefighting instructions : Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent runoff from entering drains, sewers or waterways. To fight large fires, wear full protective clothing and NIOSH approved self-contained breathing apparatus with full-face piece operated in the positive pressure/demand mode. Full firefighting turnout gear (bunker gear): Any air respirator supplied with full face piece and operated in a pressure-demand or other positive pressure mode in combination with a separate escape supply. Any self- contained breathing apparatus with a full face piece.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, etc.) Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

6.1.1. For non-emergency personnel

Protective equipment : Wear appropriate personal protective equipment (PPE): Eye and face protection, coveralls, gloves, boots.

Emergency procedures : Avoid contact with spilled material

6.1.2. For emergency responders

Protective equipment : Wear appropriate personal protective equipment (PPE): Eye and face protection, coveralls, gloves, boots.

6.2. Environmental precautions

Prevent material from entering sewers, waterways, or low areas. Do not allow material to contaminate water systems.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Ventilate air. Cleanup personnel require protective clothing and respiratory protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Keep from freezing. Do not store food, beverages or tobacco products in the storage area.

SECTION 8: Exposure controls/personal protection

8.1. Personal protective equipment

Eye/Face Protection: To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

Skin Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, socks, shoes and chemical-resistant gloves (Category C such as barrier laminate; butyl rubber ≥14 mils; nitrile rubber ≥14 mils; or neoprene rubber ≥14 mils). An emergency shower or water supply should be readily accessible to the work area.

Respiratory Protection: Inhalation potential is low due to the method of application. If vapors or mists are present, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

8.2. Exposure controls

Exposure limits have not been established for the active ingredients in this product. Other ingredient exposure limits are listed below, where applicable:

Tetrahydrofurfuryl alcohol (CAS – 97-99-4)

AIAH – Workplace Environmental Exposure Levels (WEELs – TWA) – 0.5 ppm

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Blue
Odor	: Mild characteristic
Odor threshold	: No data available
pH (1%)	: 6.6
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No flash to boiling (>93.9 °C (>201 °F))
Self-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non- flammable
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Density/bulk density	: 1.064 g/mL at 20 °C
Solubility	: Miscible with water
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: 10.31 cSt at 20 °C
Viscosity, dynamic	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: No oxidizing properties
Explosive limits	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable at normal handling and storage conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Protect from heat.

10.5. Incompatible materials

Strong oxidizers

10.6. Hazardous decomposition products

May produce toxic or irritating gases under extreme heat or fire conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity data for Mectinite are provided below:

Mectinite	
LD50 oral rat	1098 mg/kg
LD50 dermal rabbit	>2000 mg/kg
LC50 inhalation rat (4 h)	>4.65 mg/L (equivalent to 18.6 mg/L – 1 hour)
Irritation	: Skin – Not a skin irritant. Eye – Mild irritant
Corrosivity	: Not corrosive to eyes or skin
Sensitization	: Not a skin sensitizer

Chronic/sub-chronic toxicity data for Mectinite is not available. Data for active ingredients is provided below:

Emamectin Benzoate	
Carcinogenicity	: Emamectin Benzoate is not listed as a carcinogen by IARC, NTP, OSHA or ACGIH.
Reproductive & Developmental toxicity	: Reproductive toxin in animal studies only at doses acutely toxic to the maternal animal
Neurotoxicity	: Emamectin Benzoate affects the central nervous system in animals. Tremors and nerve lesions observed at lowest dose tested in rabbits.
Mutagenicity	: Emamectin Benzoate is not genotoxic or mutagenic.
Other	: Bladder changes reported in rats. Ingestion results in central nervous system effects such as muscle tremors, decreased activity, ataxia, and dilated pupils.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological Summary

Mectinite is highly toxic to aquatic organisms and bees. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.

Ecotoxicity data

Ecotoxicity data are not available for Mectinite. Active ingredient data are given below:

Emamectin Benzoate	
Fish (Rainbow Trout 96 hr.)	LC50: 0.174 mg/L
Daphnia (48 hr.)	EC50: 0.001 mg/L
Green algae (5-day)	EC50: >0.0039 mg/L
Acute toxicity to Honey bee	LD50 0.0036 µg/bee (Highly toxic to bees)
Acute toxicity mallard ducks, 14-day	46 mg/kg

12.2. Persistence and degradability

This product is not readilty biodegradable. .

12.3. Bioaccumulative potential

Aquatic hydrolysis, volatilization, adsorption to sediments, and bioconcentration are not expected to be significant.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Pesticide Disposal: Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, if allowed by state and local authorities Stay out of smoke from burning container.

SECTION 14: Transport information

Not Regulated by US DOT or Canadian TDG for ground shipment

Ground transport
Not Regulated by US DOT
Not Regulated by Canadian TDG

Transport by sea (IMDG)
UN 3082; ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Emamectin Benzoate); 9; III; Marine Pollutant

Air transport (IATA)
UN 3082; ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Emamectin Benzoate); 9; III

Additional Air, Sea and International Transportation Information

UN-No.	: 3082
Proper Shipping Name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Emamectin Benzoate)
Transport document description	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Emamectin Benzoate), 9, III
Class (UN)	: 9
Hazard labels (UN)	: 9

Packing group (UN)	: III
Marine Pollutant (Y/N)	: Y
Dangerous for the environment	:

SECTION 15: Regulatory information

FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Signal word	: CAUTION
Hazard statements	: Harmful if swallowed or absorbed through skin. Causes moderate eye irritation.
Precautionary statements	: Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

SARA 313 Regulated Chemical(s): Not applicable

Title III hazard classification:
Acute Health Hazard: Yes
Chronic Health Hazard: No
Fire: No
Reactivity/Physical hazard: No
Pressure: No

CERCLA/DOT Reportable Quantities (RQ)

Not applicable.

Canadian Regulatory Information:
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR. WHMIS Classification: D2B – Toxic

SECTION 16: Other information

MSDS US

***Disclaimer**: The information provided by Rainbow Treecare Scientific Advancements. contained herein is given in good faith and correct to the best of our knowledge. However, the information given is designed only as guidance for safe handling, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification.*