Material Safety Data Sheet

TREE-äge Insecticide

Date of Issue: Jan. 2009 Product No. 1 Liter 040-4100 8 Case 040-4105

Arborjet, Inc.

99 Blueberry Hill Rd
Woburn, MA 01801
In Case of Emergency, Call: CHEM-TEL 1-800-255-3924
Product information: 1-781-935-9070
For Non-Emergency questions about this product call: 1-800-334-9481

Section 1: Product Identification

Product Trade Name:	**TREE-äge**
EPA Signal Word:	**Warning**
Active Ingredient (% w/w):	Emamectin Benzoate (4%)
Chemical Name:	Avermectin B1, 4" –deoxy-4"-(methylamino)-,(4"R)-,benzoate (salt)
Chemical Class:	Insecticide
EPA Registration Number:	Not Available

Section 2: Composition/Information on Ingredients

Material	OSHA PEL	ACGIH TLV	OTHER	NTP/IARC/OSHA Carcinogen
Tetrahydrofurfuryl Alcohol (THFA)	Not Established	Not Established	2 ppm (TWA)****	No
Emamectin Benzoate (4%)	Not Established	Not Established	0.02 mb/m^3 TWA***	No

*** Syngenta Occupational Exposure Limit (OEL)

**** Recommended by AIHA (American Industrial Hygiene Association)

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications. Syngenta Hazard Category: C,S

Section 3: Hazards Identification

Health and Environmental: Causes eye and skin irritation. May be harmful if swallowed. Harmful if inhaled. Vapors may cause drowsiness and dizziness.

Inhalation can cause irritation to the respiratory tract and can result in chemical pneumonitis if aspirated. Ingestion results in central nervous system effects such as muscle tremors, decreased activity, ataxia (unsteadiness or incoordination), and dilated pupils (mydriasis)

Hazardous Decomposition Products: May decompose at high temperatures forming toxic gases.

Physical Properties
Appearance: Blue liquid

Odor: Aromatic

Unusual Fire, Explosion and Reactivity Hazards During a fire, irritating and possibly toxic gases may be generated by thermal

Section 4: First Aid Measures

Have the product container, label or Material Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

Eye Contact: If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing the eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

Skin Contact: If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta, (800-888-8372), a poison control center or doctor for treatment advice.

Ingestion: If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Inhalation: If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, the give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.
Note to physician: Contains petroleum distillate – vomiting may cause aspiration pneumonia.

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 parental 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, valporic acid) in patients with potentially toxic emamectin benzoate exposure

Medical Condition Likely to be Aggravated by Exposure
None known.

Section 5: Fire Fighting Measures

Fire and Explosion:

Flash Point (Test Method)**:** >226°F (Pensky-Martens CC)

Flammable Limits (% in Air): Lower: N/A Upper: N/A

Auto ignition Temperature: 662°F

Flammability: Not Applicable

Unusual Fire, Explosion and Reactivity Hazards
During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

In Case of Fire
Use dry chemical, foam or CO2 extinguishing media. Wear full protective clothing and self-contained breathing apparatus.
Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion.
Prevent use of contaminated buildings, area, and equipment until decontaminated.
Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff**.**

Section 6: Accidental Release Measures

In Case of Spill or Leak: 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, Spic and Span). 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.

Section 7: Handling and Storage

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Section 8: Exposure Controls/Personal Protection

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Ingestion: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact: Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin Contact: Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber,
neoprene rubber, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

Inhalation: A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH approved respirator with any R, P or HE filter.

Section 9: Physical and Chemical Properties

Appearance: Blue Liquid
Odor: Aromatic
Melting Point: N/A
Boiling Point: N/A
Specific Gravity/Density: 1.08 g/cm³ @ 68°F (20°C)
pH: 5.68 @ 77°F (25°C)

Solubility in H2O
Emamectin Benzoate 30 – 50 ppm (pH 7)

Vapor Pressure
Emamectin Benzoate 3 x 10(-8) mmHg @ 70°F (21°C)

Section 10: Stability and Reactivity

Stability: Stable under normal use and storage conditions.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: None known.

Materials to Avoid: None known.

Hazardous Decomposition Products: May decompose at high temperatures forming toxic gases.

Section 11: Toxicology Information

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion: Oral (LD50 Female Rat): 3129 mg/kg body weight

Dermal: Dermal (LD50 Rat): > 5000 mg/kg body weight

Inhalation: Inhalation (LC50): >2.54 mg/l air – 4 hours

Eye Contact: Severly Irritating (Rabbit)

Skin Contact: Slightly Irritating (Rabbit)

Skin Sensitization: Not a Sensitizer (Guinea Pig)

Reproductive/ Developmental Effects
Emamectin Benzoate:
Developmental and reproductive toxicity observed in dosages that are toxic to mature animals.

Chronic/Subchronic Toxicity Studies
Emamectin Benzoate:
Tremors and nerve lesions observed at lowest does tested in rabbits. Bladder changes reported in rats.

Carcinogenicity
Emamectin Benzoate:
None observed

Other Toxicity Information
None

Toxicity of Other Components
Tetrahydrofurfuryl Alcohol (THFA):
May be harmful if swallowed. Causes respiratory tract irritation. Causes skin irritation. May cause digestive tract irritation. Causes severe eye irritation. Inhalation overexposure may cause dizziness, incoordination and unconsciousness. Chronic overexposure may affect the kidney.

Target Organs
Active Ingredients
Emamectin Benzoate: Central nervous system, bladder

Inert Ingredients
Tetrahydrofurfuryl Alcohol (THFA): Digestive tract, respiratory tract, skin, eye, CNS, kidney

Section 12: Ecological Information

Summary of Effects
Emamectin Benzoate:
Very toxic to aquatic life with long lasting effects
Ecotoxicity Effects
Emamectin Benzoate
Fish (Rainbow Trout) 96-hour LC50 174 ppb
Fish (Bluegill Sunfish) 96-hour LC50 180 ppb
Green Algae 5-day EC50 > 3.9 ppb
Bird (Bobwhite Quai) LD50 Oral 264 mg/kg
Bee (Contact) LD50 0.0035 ug/bee
Invertebrate (Water Flea) 48-hour EC50 1.0ppb
Environmental Fate
Emamectin Benzoate:
The information presented here is for the active ingredient, emamectin benzoate.

Low bioaccumulation potential. Persistant in soil. Stable in water. Immobile in soil. Sinks in water (after 24 h).

Section 13: Disposal Considerations

Disposal
Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable
Listed Waste: Not Applicable

Section 14: Transport Information

DOT Classification
Ground Transport - NAFTA
Not regulated by US DOT.

Air Transport - NAFTA
Not regulated by US DOT.

B/L Freight Classification
Insecticides, NOI, O/T Poison

Comments
Water Transport - International
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Emamectin Benzoate), Marine Pollutant
Hazard Class or Division: Class 9
Identification Number: UN 3082
Packing Group: PG III
IMDG EMS #: F-A, S-F

Air Transport - International
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Emamectin Benzoate), Marine Pollutant
Hazard Class or Division: Class 9
Identification Number: UN 3082
Packing Group: PG III
Packing Auth.: 914
Note: Max. inner container 5 liter; Max. single container 450 liter

Section 15: Regulatory Information

EPCRA SARA Title III Classification
Section 311/312 Hazard Classes: Acute Health Hazard
Section 313 Toxic Chemicals: Not Applicable
California Proposition 65
Not Applicable
CERCLA/SARA 302 Reportable Quantity (RQ)
None
RCRA Hazardous Waste Classification (40 CRR 261)
Not Applicable
TSCA Status
Exempt from TSCA, subject to FIFRA

Section 16: Other Information

NFPA Hazard Ratings		HMIS Hazard Ratings	
Health	2	Health	1
Flammability	1	Flammability	1
Instability	0	Reactivity	0

0...Minimal 1…Slight 2…Moderate 3…Serious 4…Extreme

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

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