



PACIFIC BIOCONTROL CORPORATION

SAFETY DATA SHEET

1. Identification of Product and Company

Product Name: ISOMATE® DWB
U.S. EPA Registration Number: 53575-40
CANADA PCPA Registration Number: 30589

Product Uses:

For Agricultural Use: This product emits behavior modifying biochemicals (pheromones) that disrupt the mating of the dogwood borer (DWB) and is to be used as directed on its label.

Supplier of the SDS:

Pacific Biocontrol Corporation
14615 NE 13th Court, Suite A
Vancouver, Washington 98685 U.S.A.
Phone: 360-571-2247
Fax: 360-571-2248
www.pacificbiocontrol.com

Emergency Telephone Numbers:

Medical: Call Doctor or
Poison Control Center: 800-222-1222
Additional Information: 800-999-8805

2. Hazard(s) Identification

Classification of the substance or mixture:

Hazard Classification: Irritant (skin and eye)
U.S. EPA Signal Word: CAUTION
Hazard Statements: None



Pictogram:

Precautionary Statements:

KEEP OUT OF REACH OF CHILDREN. CAUTION. Avoid contact with skin, eyes or clothing. Harmful if absorbed through skin. Causes moderate eye irritation. After handling, wash thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using toilet. Remove and wash contaminated clothing before reuse.

KEEP OUT OF REACH OF CHILDREN. Do not open product packets until ready to use. May irritate skin. Avoid contact with skin, eyes or clothing. Users must wear suitable protective clothing including chemical resistant gloves and eye protection when handling dispensers. Wash hands with soap and water after use.

3. Composition/Information on Ingredients

DWB Pheromone Components	CAS NO.	EINECS NO.	Percentage
(Z,Z)-3,13-Octadecadien-1-yl Acetate*	53120-27-7	258-374-8	77-83
(E,Z)-2,13-Octadecadien-1-yl Acetate*	86252-65-5		5-6
(Z,Z)-3,13-Octadecadien-1-ol*	66410-24-0		1-2
(E,Z)-2,13-Octadecadien-1-ol*	123551-47-3		0.2-0.3
Other Ingredients**			8.7-16.8

*Components are members of the well-characterized group of SCLPs (i.e. Straight Chain Lepidopteran Pheromones).

**Other ingredients, which are maintained as trade secrets, are any substances other than an active ingredient contained in this product. They are non-hazardous, but their identities are withheld because they are considered trade secrets.

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4. First-Aid Measures

First Aid:

Doctor or Poison Control Center:

Have the product container or label with you when contacting a poison control center or doctor or going for treatment.

If on Skin or Clothing:

Remove contaminated clothing and wash separately before reuse. Rinse skin immediately with plenty of water for 15-20 minutes. Contact 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. Contact a poison control center or doctor for treatment advice.

If Inhaled:

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

If Swallowed:

Contact a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so. Do not give anything by mouth to an unconscious person.

Toxicological Information:

Treat symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media:

Water spray or fog, Carbon dioxide (CO₂), dry chemical power, foam. Fight larger fires with water spray or fog or alcohol-resistant foam.

Unsuitable Extinguishing Media:

High volume water jet.

Special Hazards:

Keep away from ignition sources, heat, sparks and open flame.

Precautions and Special Protective Equipment for Firefighters:

Firefighters should use self-contained breathing apparatus and protective clothing. Collect contaminated firefighting water separately as it should not enter drains or bodies of water.

6. Accidental Release Measures

Personal Precautions:

Do not open product packets until ready to use. Avoid contact with skin, eyes or clothing. Harmful if absorbed through skin. Causes moderate eye irritation. When handling dispensers, wear suitable protective clothing including chemical resistant gloves and eye protection. After handling, wash thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.



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6. Accidental Release Measures (continued)

Environmental Precautions:

For terrestrial uses: 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 water when disposing of this product.

Do not contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes. Do not dispose of dispensers in or near streams or bodies of water.

Methods for Containment and Cleaning Up:

Due to the small amount of chemicals in the product, even if the container or the dispenser is damaged or broken, a spill of the chemical is highly unlikely. Nonrefillable container. Do not reuse or refill this container. Contact the manufacturer and the local regulatory agency in case of a spill and for clean-up of spills.

Dispose of empty dispensers or unused material that cannot be used according to label instructions in accordance with local regulations. Dispose of empty packets in the trash or in accordance with local regulations. For information on disposal of unused, unwanted product, contact the manufacturer or the local regulatory agency. Do not contaminate water, food or feed by storage or disposal.

7. Handling and Storage

Precautions for Safe Handling:

Do not open product packets until ready to use. Avoid contact with skin, eyes or clothing. Harmful if absorbed through skin. Causes moderate eye irritation. When handling dispensers, wear suitable protective clothing including chemical resistant gloves and eye protection. After handling, wash thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Keep away from ignition sources, heat, sparks and open flame.

Conditions for Safe Storage:

Do not contaminate water, food or feed by storage or disposal of unused or used dispensers. Store original unopened product packets in a dry location at temperatures below 40°F (4°C). To prevent contamination with food or feed, store only unopened product packets in cold storage facilities that are used for food or feed.

8. Exposure Controls/Personal Protection

Exposure Limits:

No exposure limit has been determined.

Appropriate Engineering Controls:

Keep away from ignition sources, heat, sparks and open flame. Eye washes and showers for emergency use.

Personal Protection Measures:

Do not open product packets until ready to use. Avoid contact with skin, eyes or clothing. Harmful if absorbed through skin. Causes moderate eye irritation. When handling dispensers, wear suitable protective clothing including chemical resistant gloves and eye protection. After handling, wash thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Special Requirements:

For agricultural use only. Do not contaminate water, food or feed by storage or disposal of unused or used dispensers. To prevent contamination with food or feed, store only unopened product packets in cold storage facilities that are used for food or feed.



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9. Physical and Chemical Properties

Properties	DWB Pheromone Components*
Appearance	Light yellow transparent liquid
Odor	Mild waxy and sweet
pH	5-7
Flash Point (Method used)	186°C (Cleveland open cup)
Flammable Limits	No data
Melting Point	Liquid at room temperature
Boiling Point	190-203°C/66Pa
Vapor Pressure	0.0002-0.0005 Pa (20°C)
Vapor Density (Air=1)	Not applicable
Specific Gravity	0.874-0.885 (20°C)
Solubility	Soluble in n-hexane, n-pentane, benzene, toluene, methanol, ethanol, ethyl ether, acetone, methylene chloride, chloroform, acetonitrile, THF, DMF, acetic acid, etc. (Insoluble in DMSO and ethylene glycol)

*Components are members of the well-characterized group of SCLPs.

10. Stability and Reactivity

Chemical Stability:

Product is stable under recommended storage and handling conditions.

Hazardous Reactions:

No known hazardous reactions when stored and handled according to instructions.

Conditions/Materials to Avoid:

Keep away from ignition sources, heat, sparks and open flame.

11. Toxicological Information

DWB pheromone components are members of the well-characterized group of SCLPs. The U.S. EPA has reviewed this class of pheromones, and “it is the Agency’s position that based on low toxicity in animal testing, and expected low exposure to humans, no risk to human health is expected from the use of lepidopteran pheromones, and consumption of food containing residues of these pheromones present no risk.”

The data available to the U.S. EPA (Federal Register Notice 1/26/94) on pheromones indicated no acute mammalian toxicity at the limit dose levels as follows: acute oral toxicity ($LD_{50} > 5,000$ mg/kg - category IV, nontoxic); acute dermal toxicity ($LD_{50} > 2,000$ mg/kg – category IV, nontoxic); acute inhalation toxicity (LD_{50} generally > 5 mg/L – category III-IV, practically nontoxic); no evidence of mutagenicity (Ames *Salmonella* assay); minimal eye and skin irritation (category IV); pheromones are also not likely to be dermal sensitizers (Buehler hypersensitivity test).

Precautionary Statements:

KEEP OUT OF REACH OF CHILDREN. CAUTION. Avoid contact with skin, eyes or clothing. Harmful if absorbed through skin. Causes moderate eye irritation. After handling, wash thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using toilet. Remove and wash contaminated clothing before reuse.

KEEP OUT OF REACH OF CHILDREN. Do not open product packets until ready to use. May irritate skin. Avoid contact with skin, eyes or clothing. Users must wear suitable protective clothing including chemical resistant gloves and eye protection when handling dispensers. Wash hands with soap and water after use.



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12. Ecological Information

DWB pheromone components are members of the well-characterized group of SCLPs, a class of pheromones where “adverse effects on non-target organisms (mammals, birds and aquatic organisms) are not expected because these pheromones are released in very small amounts to the environment and act on a select group of insects”.

Environmental Hazards Statements:

For terrestrial uses: 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 water when disposing of this product.

Do not contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes. Do not dispose of dispensers in or near streams or bodies of water.

13. Disposal Considerations

Waste Disposal:

Do not contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes. Do not dispose of dispensers in or near streams or bodies of water. Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility.

Dispose of empty dispensers or unused material that cannot be used according to label instructions in accordance with local regulations. Dispose of empty packets in the trash or in accordance with local regulations. For information on disposal of unused, unwanted product, contact the manufacturer or the local regulatory agency. Do not contaminate water, food or feed by storage or disposal.

14. Transport Information

Transportation:

Description:	Plastic hand-applied pheromone dispenser
Hazard Class:	Not applicable – Not classified as dangerous
Freight Class:	CLASS 60
Identification Numbers:	NMFC# S155050-12
Packing Group:	Not applicable

Flash Point:

Not established for pheromone dispenser. Flash point is 186°C for DWB pheromone components.

15. Regulatory Information

U.S. EPA

This chemical is a pesticide product registered by the U.S. EPA and is subject to certain labeling requirements under Federal pesticide law. These requirements differ from the classification criteria and hazard information required for SDSs and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is below. The pesticide label also includes other important information, including the Directions for Use.

KEEP OUT OF REACH OF CHILDREN
CAUTION

Avoid contact with skin, eyes or clothing. Harmful if absorbed through skin. Causes moderate eye irritation. After handling, wash thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.



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15. Regulatory Information (continued)

This product is registered under U.S. EPA Registration Number 53575-40 and is categorized under U.S. EPA Toxicity Health Hazard Category III – CAUTION.

Health Canada

This product is registered for sale in Canada under PCPA Registration Number 30589 and has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains the information required by those regulations. This SDS will be noncompliant three years after the issue date.

16. Other Information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This safety data sheet is offered solely for your information, consideration and investigation. The data described in this SDS consist of data on literature, our acquisition data and analogical inference by data of similar chemical substances or products. Pacific Biocontrol provides no warranties, either express or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein. Final determination of suitability of any material is the sole responsibility of the user.

Revision Date:

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(Replaces all previous versions)