



PACIFIC BIOCONTROL CORPORATION

SAFETY DATA SHEET (SDS)

Prepared: April 28, 2016

1. Identification of Product and Company

Product Names:

**ISOMATE® CM/OFM MIST
ISOMATE® CM/OFM MIST II**

EPA Registration Nos.:

53575-44, 53575-46

For Agricultural Use:

This aerosol product emits the pheromone of the codling moth (CM), *Cydia pomonella*, and oriental fruit moth (OFM), *Grapholita molesta*, to disrupt their mating. This product is applied in apple, peach, nectarine orchards and any other areas where CM and OFM are overlapping problems.

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
800-222-1222
Poison Control Center:
Leak, Fire, Spill or Accident: Call CHEMTREC
CHEMTREC (USA and Canada) 800-424-9300
CHEMTREC (International) 703-527-3887
Additional Information: 800-999-8805

2. Hazard(s) Identification

Classification of the substance or mixture:

Hazard Classification:

Irritant (skin and eye); Flammable (aerosol)

EPA Signal Word:

Caution (Reference section 15)

Hazard Statements:

Reference Label Precautionary statement

Pictogram:



Label Precautionary Statement:

(Reference section 15)

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

3. Composition/Information on Ingredients

Components	CAS NO.	EINECS NO.	Approximate w/w%
E,E-8,10-Dodecadien-1-ol (CM)*	33956-49-9	251-761-2	10-20
Z-8-Dodecen-1-yl Acetate (OFM)*	28079-04-1	248-823-6	10-15
E-8-Dodecen-1-yl Acetate (OFM)*	38363-29-0	253-904-4	<1
Z-8-Dodecen-1-ol (OFM)*	40642-40-8	255-019-9	<1
Ethanol	64-17-5	200-578-6	20-40
1,1,1,2-Tetrafluoroethane	811-97-2	212-377-0	30-50

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



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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 Inhaled:

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

If on Skin or Clothing:

Remove contaminated clothing. Immediately rinse skin for 15-20 minutes using plenty of water. Contact a poison control center or doctor for treatment advice.

If in Eyes:

Immediately hold eyes open, slowly and gently rinse with water for 15-20 minutes. If wearing contact lenses, rinse eyes for 5 minutes, remove contact lenses, and continue rinsing. Contact a poison control center or doctor for treatment advice.

If Swallowed:

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

5. Fire-Fighting Measures

Suitable Extinguishing Media:

Alcohol resistant foam, water fog, carbon dioxide (CO₂). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable Extinguishing Media:

Do not use water jet as this will spread the fire.

Special Hazards:

Keep away from ignition sources, heat, sparks and open flame. Do not puncture or incinerate container. Heat (temperatures above 130°F) can cause pressurized containers to explode. During fire, gases hazardous to health may be formed. If container is not properly cooled, it can rupture in the heat of a fire.

Precautions and Special Protective Equipment for Firefighters:

Pressurized container is flammable. In case of fire and/or explosion, do not breathe fumes. Evacuate area of all unnecessary personnel. Use standard fire fighting procedures. Self-contained breathing apparatus and full protective clothing must be worn if containers rupture and contents are released under fire conditions. Move containers away from fire area if there is no risk. Use water fogging nozzle to cool containers.

Hazardous Combustion Products:

Hazardous decomposition products may include carbon oxides, hydrogen fluoride, carbonyl fluoride.



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ISOMATE CM/OFM MIST, ISOMATE CM/OFM MIST II

6. Accidental Release Measures

Personal Precautions:

Reference sections 5, 7 and 8.

Environmental Precautions:

Do not contaminate water, food or feed by storage or disposal. 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 by cleaning of equipment or disposing of equipment wash waters.

Methods for Containment and Cleaning Up:

If container is punctured, contain the spill. Ventilate closed spaces before entering them. Eliminate all ignition sources, heat, sparks and open flame. Wear appropriate clothing including protective garments to prevent excessive skin contact and protective eyewear. For small spills, wipe up with absorbent material. For large spills, dike the material if possible. Use a non-combustible material like vermiculite, sand or earth to soak up product.

Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility. Do not reuse or refill this container. Remove empty can from emitter and discard in trash or at an approved waste disposal facility. Do not puncture or incinerate. If can is empty offer for recycling.

7. Handling and Storage

Precautions for Safe Handling:

Reference section 6 and 8.

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

Conditions for Safe Storage:

Do not contaminate water, food or feed by storage or disposal. Store container in a cool, dry place. Contents are under pressure. Keep away from heat, sparks, flame and other possible sources of ignition. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.

8. Exposure Controls/Personal Protection

Exposure Limits:

None established for end use product.

Components	NIOSH (TWA)	ACGIH TLV (STEL)	OSHA Table Z-1 (PEL)	OTHER (PEL)
Ethanol	1900mg/m ³ 1000ppm	1000ppm	1900mg/m ³ 1000ppm	
1,1,1,2-Tetrafluoroethane				1000ppm Dupont AEL

Engineering Controls:

None.

Personal Protection Measures:

Reference section 7.

Wear protective garments to prevent excessive skin contact and protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using toilet. Remove contaminated clothing and wash before reuse. (Personal protection is based upon normal uses and conditions.)

Special Requirements:

For agricultural use only. Use outside with adequate ventilation. Not to be used inside or in closed spaces.



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ISOMATE CM/OFM MIST, ISOMATE CM/OFM MIST II

9. Physical and Chemical Properties

Properties	
Appearance	Aerosol Mist
Odor	Mild and Fatty-Fruity
pH	Not soluble or dispersible in water. 6.0 for CM/OFM pheromone*.
Melting/Freezing Point	Not established.
Boiling Point	Not a liquid at room temperature. 110-125°C/2mmHg for CM/OFM pheromone*.
Flash Point	Flash extension is 0cm with no flashback.
Evaporation Rate	Not applicable.
Flammability	Pressurized container is flammable.
Explosive Limits	Not established.
Vapor Pressure	Not established. 8.16x10 ⁻³ mmHg for CM/OFM pheromone*.
Specific Gravity	8.22 lbs/gallon.
Solubilities	Not applicable. For CM/OFM pheromone*: Insoluble in water; Soluble in common organic solvents (except DMSO, ethylene glycol).
Partition Coefficient; Auto-ignition Temperature; Decomposition Temperature	Not applicable.
Viscosity	Not applicable.

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

10. Stability and Reactivity

Chemical Stability:

Reference sections 7 and 14.

Product is stable under normal conditions of use, storage and transport. (For directions on use of product, please reference product's label.)

Hazardous Reactions:

Heat (temperatures above 130°F) can cause pressurized container to explode.

Conditions/Materials to Avoid:

Pressurized container is flammable. Avoid contact with excessive heat, sparks, open flame or other possible sources of ignition.

Hazardous Decomposition Products:

Carbon oxides, hydrogen fluoride, carbonyl fluoride, fluorocarbons.



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ISOMATE CM/OFM MIST, ISOMATE CM/OFM MIST II

11. Toxicological Information

Due to the formulation type, no studies have been performed on the end-use aerosol. (Toxicology data is not required under US EPA 40 CFR 158.2050(a)(2).) Information about CM/OFM Pheromone is reported below. CM/OFM Pheromone is member of the well-characterized group of SCLPs, a class of pheromones with no expected risks to human health or non-target organisms.

	CM Pheromone:	OFM Pheromone:
Acute Toxicity:		
Oral LD50	>5000 mg/kg	>1712 mg/kg
Dermal LD50	>2000 mg/kg	>2000 mg/kg
Inhalation LC50	>5 mg/l	>11.37 mg/l
Primary Irritant Effect:		
On the Skin:	Slight to Moderate	Mild
In the Eye:	Slight to Moderate	Slight
Sensitization:	Not considered skin sensitizer	Not considered skin sensitizer
Ames Mutation Assay:	Negative	Negative
Carcinogenicity:	No data found	No data found

KEEP OUT OF REACH OF CHILDREN. CAUTION: Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye and skin irritation. Avoid contact with skin, eyes or clothing. Avoid breathing vapor.

12. Ecological Information

Due to the formulation type, no studies have been performed on the end-use product. (Non-target toxicology data is not required under US EPA 40 CFR 158.2060(a)(2).) Information about CM/OFM Pheromone is reported below. CM/OFM Pheromone is member of the well-characterized group of SCLPs, a class of pheromones with no expected risks to human health or non-target organisms.

	CM Pheromone:	OFM Pheromone:
Birds (LD50)	>2150 mg/kg	>2000 mg/kg
Fish (LC50)	>120 mg/l	>1000 mg/l
Daphnia (EC50)	>1.3 mg/l	>0.4 mg/l

Do not contaminate water, food or feed by storage or disposal. 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 by cleaning of equipment or disposing of equipment wash waters.

13. Disposal Considerations

Waste Disposal: Reference sections 6, 7 and 8.
Do not contaminate water, food or feed by storage or disposal. 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 by cleaning of equipment or disposing of equipment wash waters. Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility. Nonrefillable container. Do not reuse or refill this container. Remove empty can from emitter and discard in trash or at an approved waste disposal facility. Do not puncture or incinerate. If can is empty offer for recycling.



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14. Transport Information

Transportation by Road:	
Shipping Name:	Aerosols, flammable (each not exceeding 1 L capacity)
Hazard Class:	2.1
UN Number:	UN1950
Packing Group:	Not applicable.
Flash Point:	>13°C (Closed cup)
Transportation by Air:	
Shipping Name:	Aerosols, flammable
Hazard Class:	2.1
UN Number:	UN1950
Hazard Label:	Flammable gas
Packing Group:	Not applicable.
Flash Point:	>13°C (Closed cup)

15. Regulatory Information

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

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

These products are registered with the U.S. EPA under EPA Registration Numbers 53575-44 and 53575-46. Product is categorized under U.S. EPA Toxicity Health Hazard Category III – CAUTION.

16. Other Information

FOR AGRICULTURAL USE ONLY

As of the preparation date, this product did not contain a chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

This SDS 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:	April 28, 2016 (replaces all previous versions)
SDS Prepared By:	Pacific Biocontrol Corp.