



PACIFIC BIOCONTROL CORPORATION

SAFETY DATA SHEET

Section 1: Identification

COMPANY NAME
Pacific Biocontrol Corporation
14615 NE 13th Court, Suite A
Vancouver, Washington 98685

EMERGENCY TELEPHONE
Emergency: 800-999-8805
Information: 360-571-2247
Fax: 360-571-2248
www.pacificbiocontrol.com
K. Bolan [kbolan@pacificbiocontrol.com]

Safety Data Sheet Competent Person:

MANUFACTURER: Spray Products

EPA Est. Number 34631-PA-001

DATE PREPARED: March 28, 2012

REVISION DATE: September 10, 2012

PRODUCT NAME: **ISOMATE® CM MIST**

SYNONYMS: Codlure, Codlemone

US EPA REGISTRATION: 53575-42

PRODUCT USE: Isomate CM Mist contains a behavior modifying biochemical (pheromone) that disrupts the mating of codling moth, *Cydia pomonella*. Use in apple, pear, walnut and other orchards where the codling moth is a pest. Isomate CM Mist is used with Pacific Biocontrol's metering device to emit precise amounts of pheromone.

Section 2: Hazards Identification

HMIS Hazard Classification:

Component	Health (Blue)	Flammability (Red)	Physical Hazard (Orange)	Personal protection (White)
ISOMATE CM MIST	1	2	1	B

US Precautionary Statements - Hazards Labeling

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.

Section 3: Composition, Information on Ingredients

PRODUCT COMPOSITION	APPRX %	ACGIH TLV	OSHA PEL	NIOSH REL	CAS NO.	EINECS/ELINCS	DANGER SYMBOL	RISK PHRASE	DSL CANADA
(E,E)-8,10-Dodecadien-1-ol (Active ingredient)	<21	-----	-----	-----	33956-49-9	251-761-2	-----	R36/38	NDSL
Ethanol (Solvent)	>41	1000 ppm; STEL	1000 ppm; 1900 mg/m3	1000 ppm; 1900 mg/m3	64-17-5	200-578-6 603-002-00-5	F+	R11	Y
1,1,1,2-Tetrafluoroethane (Propellant)	<38	-----	-----	-----	811-97-2	212-377-0	-----	-----	Y



PACIFIC BIOCONTROL CORPORATION

Section 4: First Aid Measures

KEEP OUT OF REACH OF CHILDREN. 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.

INHALATION:	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.
SKIN CONTACT OR CLOTHING CONTACT:	Remove contaminated clothing. Immediately rinse skin for 15-20 minutes using plenty of water. Contact a poison control center or doctor for treatment advice.
EYE CONTACT:	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.
INGESTION:	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.
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. You may also contact Pacific Biocontrol at 1-800-999-8805 for additional information.

Section 5: Fire-fighting Measures

EXTINGUISHING MEDIA:	Water spray/fog, carbon dioxide (CO ₂), dry chemical powder, foam. Fight larger fires with water spray/fog or alcohol-resistant foam.
SPECIAL FIREFIGHTING PROCEDURES:	If burned, stay out of smoke. Evacuate area of all unnecessary personnel. Use standard fire fighting procedures. Full protective equipment should be worn. Put on breathing apparatus. Use water spray or fog nozzle to keep container cool. Move container away from fire if there is no risk.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Carbon oxides formed when burned. Heat (temperatures above 130°F) can cause pressurized containers to explode. Can be cooled with water fogging nozzles. Collect contaminated fire fighting water separately. It must not enter drains.

Section 6: Accidental Release Measures

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

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.

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

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 when handling and before eating, drinking, chewing gum, using tobacco or using toilet. Remove contaminated clothing and wash before reuse.

DISPOSAL:

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 metering system and discard in trash or at an approved waste disposal facility. Do not puncture or incinerate. If can is empty offer for recycling.



PACIFIC BIOCONTROL CORPORATION

Section 7: Handling and Storage

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

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.

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

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.

INFORMATION ON EMPTIED CONTAINER:

Nonrefillable container. Do not reuse or refill this container. Remove empty can from metering system and discard in trash or at an approved waste disposal facility. Do not puncture or incinerate. If can is empty offer for recycling.

Section 8: Exposure Controls/Personal Protection

VENTILATION:	Not required under normal use conditions.
RESPIRATORY PROTECTION:	Not required under normal use conditions.
PROTECTIVE GLOVES:	Recommend using gloves.
EYE PROTECTION:	Recommend using gloves.
PROTECTIVE CLOTHING:	Wear protective garments to prevent excessive skin contact and protective eyewear. Remove and wash contaminated clothing before reuse.
OTHER EQUIPMENT:	Not required under normal use conditions.
WORK/HYGIENE PRACTICES:	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.

Section 9: Physical and Chemical Properties

APPEARANCE - COLOR OF:	Clear Yellow
PHYSICAL STATE:	Aerosol mist
ODOR:	Not Required for EPA Registration
PH:	Not soluble or dispersible in water
MELTING POINT:	Not a solid at room temperature
BOILING POINT:	Not a liquid at room temperature
EVAPORATION RATE:	Not Required for EPA Registration
FLAMMABILITY:	0 cm by Flash Extension
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:	Not Required for EPA Registration
VAPOR PRESSURE:	Not Required for EPA Registration
VAPOR DENSITY:	Not Required for EPA Registration
SPECIFIC GRAVITY:	7.76 lbs/gallon
SOLUBILITY IN WATER/SOLVENTS:	Not Required for EPA Registration
PARTITION COEFFICIENT:	Not Required for EPA Registration
AUTO IGNITION TEMPERATURE:	Not Required for EPA Registration
DECOMPOSITION TEMPERATURE:	Not Required for EPA Registration
VISCOSITY:	Not a liquid
EXPLOSIVE PROPERTIES:	Not potentially explosive
OXIDIZING PROPERTIES:	Does not contain an oxidizing agent



PACIFIC BIOCONTROL CORPORATION

Section 10: Stability and Reactivity

CHEMICAL STABILITY:
CONDITIONS TO AVOID:

Stable if follow directions on label.

Avoid contact with strong oxidizers, excessive heat, sparks, open flame or other possible sources of ignition.

INCOMPATIBILITY (MATERIALS TO AVOID):
HAZARDOUS DECOMPOSITION PRODUCTS:

Acids, peroxides and other oxidizing agents.

Carbon oxides formed when burned. Hydrocarbon fumes and smoke.

HAZARDOUS POLYMERIZATION:

Not reported to occur under normal conditions.

Section 11: Toxicological Information

US Precautionary Statements - Hazards Labeling

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.

The active ingredient is a Straight Chain Lepidopteran Pheromone (SCLP), a class of pheromones with no expected risks to human health or non-target organisms.

<u>GHS Required Criteria</u>	<u>Toxicity Criteria</u>	<u>Toxicity Information</u>	<u>Comments</u>	<u>Chemical Constituent</u>
Acute Toxicity	LD50 (Oral/Rat):	>5000 mg/kg	Category IV	SCLP
	LD50 (Dermal/Rabbit):	>2000 mg/kg	Category III	SCLP
	LD50 (Inhalation/Rat):	>5 mg/l	Category IV	SCLP
	LD50 (Oral/Rat):	>7000 mg/kg	Category IV	Solvent
	LD50 (Oral/Mouse):	>7000 mg/kg	Category IV	Solvent
	LC50 (Inhalation/Mice):	39 mg/l	Category IV	Solvent
Skin Irritation	LC50 (Inhalation/Rat):	36 mg/l	Category IV	Solvent
	LC50 (Inhalation/Rat):	>500,000 ppm		Propellant
	Rabbit	Slight to Moderate	Category III	SCLP
	Rabbit	Nonirritating	Category IV	Solvent
	Rabbit	Slight	Category IV	Propellant
	Rabbit	Slight to Moderate	Category III	SCLP
Eye Irritation	Rabbit	Mild	Category IV	Solvent
	Rabbit	Mild		Propellant
	Guinea Pigs	Not considered skin sensitizer.		SCLP
Skin Sensitization	Guinea Pigs	Not considered skin sensitizer.		Propellant
		No information is available.		
Germ Cell Mutagenicity		No information is available.		
Carcinogenicity		Not listed	NTP	
		Not listed	IARC	
		Not listed	OSHA	
Ames test		No mutagenicity.		SCLP
		Negative.		Propellant
Reproductive Toxicity		No information is available.		
STOST - Single or Repeated Exposure	Inhalation	No information is available.		
Aspiration Hazard		No information is available.		

STOST = Specific Target Organ Systemic Toxicity; EPA Toxicity Category I, II, III or IV

Only selected Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.



PACIFIC BIOCONTROL CORPORATION

Section 12: Ecological Information

US Environmental Hazards Labeling

For terrestrial uses: Do not apply directly to water, to areas where surfact 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.

		Chemical
BIODEGRADATION:	Easily decompose to carbon dioxide and water. No residue in soil.	SCLP
BIOACCUMULATION:	No information is available. Exposure not likely.	
ECOTOXICITY:	Birds (Bobwhite quail): 14-day Acute Oral LD50: >2150 mg/kg	SCLP
	Fish (Rainbow trout): 96-hour Acute Toxicity LC50 >120 mg/l	SCLP
	Aquatic Invertebrate (<i>Daphnia magna</i>): 48-hour Acute Toxicity EC50 >1.3 mg/l	SCLP
	Fish (Rainbow trout): 96-hour LC50: 14000 mg/l	Solvent
	Fish (Fingerling trout): 24-hour 11200 mg/l	Solvent
	Fish (Rainbow trout): 96-hour LC50: 450 mg/l	Propellent
	Aquatic Invertebrate (<i>Daphnia magna</i>): 48-hour EC50: 980 mg/l	Propellent
MOBILITY:	No information is available. Exposure not likely.	

Section 13: Disposal Considerations

WASTE FROM RESIDUES/UNUSED PRODUCTS.

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 metering system and discard in trash or at an approved waste disposal facility. Do not puncture or incinerate. If can is empty offer for recycling.

Section 14: Transport Information

ROAD TRANSPORT (ADR):

DOT HAZARD CLASSIFICATION:	LIMITED QUANTITY
DOT SHIPPING NAME:	LIMITED QUANTITY
UN NUMBER ROAD:	UN 1950, Class 2.2
DOT CLASSIFICATION:	Aerosols, Non-Flammable
For US Ground Only:	AEROSOLS LEVEL-1

Limited quantity exception per DOT 49 CFR 173.150

SEA TRANSPORT (IMDG):

Sea Transport Notes UN 1950, Aerosols, Non-Flammable, Class 2.2 - LIMITED QUANTITY

AIR TRANSPORT (IATA/ICAO):

Air Transport Notes UN 1950, Aerosols, Non-Flammable, Class 2.2 - LIMITED QUANTITY

Section 15: Regulatory Information

TOXIC SUBSTANCES CONTROL ACT (TSCA) STATUS:

This product is in compliance with rules, regulations, and orders of TSCA. All components are listed on the TSCA inventory.



PACIFIC BIOCONTROL CORPORATION

U.S. EPA List of Enerts: Ethanol and 1,1,1,2-Tetrafluorethane are on EPA;s List 4B - EPA states it has sufficient information to reasonably conclude that the current use pattern in Pesticide Products will not adversely affect public Health or the Environment.

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:

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.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTION 313 SUPPLIER NOTIFICATION:

This regulation requires submission of annual reports of toxic chemical(s) that appear in section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40 CFR 372. This information must be included in all MSDS"s that are copied and distributed for the material.

The Section 313 toxic chemicals contained in this product are: None.

CALIFORNIA PROPOSITION 65:

This regulation requires a warning for California Proposition 65 chemical(s) under the statute.

The California proposition 65 chemical(s) contained in this product are: None.

STATE RIGHT-TO-KNOW TOXIC SUBSTANCE OR HAZARDOUS SUBSTANCE LIST:

Florida Toxic Substance(s):	Not listed
Illinois Toxic Substance(s):	Not listed
Massachusetts's Hazardous Substance(s):	Ethanol
Michigan Hazardous Substance(s):	Not listed
New Jersey Hazardous Substance(s):	Ethanol
Pennsylvania Hazardous Substance(s):	Ethanol

CANADA:

This MSDS/SDS will be noncompliant 3 years after the issue date. This MSDS contains all of the information required by the Controlled Products Regulations (CPR).

EUROPEAN UNION:

No chemical safety assessment according to article 14 of Regulation (EC) 1907/2006 has been done. The active substances of the mixture are considered to be registered under REACH according to article 15 of Regulation (EC)1907/2006.

Section 16: Other Information

FOR AGRICULTURAL USE ONLY

This material safety data sheet is offered solely for your information, consideration and investigation. The data described in this MSDS consist of data on literature, our acquisitional data and analogical inference by data of similar chemical substance or product. Pacific Biocontrol Corporation provides no warranty, either express or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein.