SAFETY DATA SHEET

1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

TRADE NAMES:	**CheckMate® Puffer® CM-OFM Pro**
SYNONYMS:	Aerosol Codling Moth and Oriental Fruit Moth mating disruption product.
USE:	CheckMate Puffer CM-OFM is a pheromone containing aerosol product for the control of the codling moth (*Cydia pomonella*) and the oriental fruit moth (*Grapholita molesta*). The product is used in agriculture to control populations of these pests via mating disruption.
COMPANY IDENTIFICATION:	Suterra LLC 20950 NE Talus Place Bend, Oregon 97701 U.S.A. TEL: (541) 388-3688 FAX: (541) 388-3705
EMERGENCY TELEPHONE NUMBERS:	
LEAK, FIRE, SPILL, OR ACCIDENT:	(800) 424-9300 (CHEMTREC – U.S.A. & CANADA) (703) 527-3887 (CHEMTREC – Collect - All Other Countries)
MEDICAL:	Call Doctor, Poison Control Center or (541) 388-3688

2. HAZARDS IDENTIFICATION

The following determinations have been made according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals:

GHS Signal Word: WARNING

GHS Symbols:

GHS Hazard Statements:
Harmful if inhaled
Causes skin irritation
Causes eye irritation
Flammable aerosol

GHS Precautionary Statements:
Avoid breathing vapor. Use only outdoors or in a well-ventilated area.
Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco.
Use protective gloves and protective garments to prevent excessive skin contact when handling.
Keep away from heat/sparks/open flames/hot surfaces. No Smoking. Do not spray on an open flame or other ignition source.
Pressurized container: Do not pierce or burn, even after use.

GHS Response Statements:
If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a Poison Control Center or doctor for advice if you feel unwell.
If on skin or clothing: Take off contaminated clothing and wash before reuse. Rinse skin immediately with plenty of water for 15-20 minutes. Call a Poison Control Center or doctor for advice if you feel unwell, or if skin irritation occurs.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

GHS Storage Statements:
Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.

3. COMPOSITION

PRINCIPAL COMPONENT(S)	CAS NO.	APPROXIMATE w/w%
E,E,-8,10-Dodecadien-1-ol	33956-49-9	9.03
Z-8-Dodecen-1-yl acetate	28079-04-1	11.63
E-8-Dodecen-1-yl acetate	38363-29-0	0.74
Z-8-Dodecen-1-ol	40642-40-8	0.13
Ethanol	64-17-5	30-50
Other Ingredients: 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.		30-50

4. FIRST AID MEASURES

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

EYE CONTACT: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses if worn after the first five minutes and continue rinsing. Call a doctor or Poison Control Center for advice.

SKIN CONTACT: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a doctor or Poison Control Center for advice.

INHALATION: Move person 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 doctor or Poison Control Center for advice.

INGESTION: Call a doctor or Poison Control Center immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a Poison Control Center or doctor. Do not give anything by mouth to an unconscious person.

5. FIREFIGHTING MEASURES

FLASH POINT (Method Used)	FLAMMABLE LIMITS (% by Volume in Air)	LEL	UEL
Aerosol flame projection is 15 to 45 cm, with no flashback Product is flammable	Not established	Not established.	Not established.

EXTINGUISHING MEDIA: Dry Chemical, Foam, Carbon Dioxide (CO_2)

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable. Contents under pressure. Keep away from ignition sources, heat, sparks and open flame. Exposure to temperatures above 130°F. may cause bursting. During fire, gases hazardous to health may be formed. Hazardous decomposition products may include carbon oxides, hydrogen fluoride, carbonyl fluoride.

ADVICE FOR FIREFIGHTERS: Evacuate area of all unnecessary personnel. Use standard fire fighting procedures. Containers will explode if heated to high enough temperatures. Use water fogging nozzle to cool containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with eyes and skin. Avoid inhalation of spray mist. Use protective gloves when handling the dispensers and handle in a well-ventilated area.

6.2 Environmental precautions

Avoid release to the environment. Keep away from drainage system, surface and ground water. Prevent infiltration of water sources and sewers.

6.3 Methods and material for containing and cleaning up

Contain the dispersion. Use absorbent material and remove in a clean container. Wastes should be disposed according to current legislation.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Wear protective clothing as described in section 8, if justified by exposure conditions. Avoid unnecessary contact with eyes and skin. Avoid vapor inhalation. Wash hands after handling. Prevent contamination of water sources, food or feed.

7.2 Conditions for safe storage:

Store in its original container in a dry, cool and well-ventilated area until is used. Avoid ignition. Protect from heat and from sunlight. Do not expose to temperatures exceeding 130 °F.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

RECOMMENDED EXPOSURE LIMITS:	None established for end-use product.
LISTED AS CARCINOGEN BY NTP, IARC, OR OSHA:	No.
OTHER HEALTH EFFECTS:	No known adverse effects expected.
HEALTH HAZARD CATEGORIES:	EPA Toxicity Category: III - CAUTION.

EFFECTS OF OVEREXPOSURE

EYE CONTACT:	Pheromone is minimally irritating. Propellant can freeze-burn the eyes if directed at eyes.
SKIN CONTACT:	Pheromone is moderately irritating. Propellant can freeze-burn skin if directed at skin.
INHALATION:	Avoid breathing vapors when in confined areas.
INGESTION:	Due to product form ingestion is not considered likely. Harmful if ingested. Avoid swallowing product.
CHRONIC:	Long-term studies have not been conducted, however, no adverse effects are expected.

EXPOSURE CONTROLS

RESPIRATORY PROTECTION:	Do not breathe vapors. No type of specific protective equipment is required.
HAND PROTECTION	Wear gloves when handling.
EYE PROTECTION:	Avoid contact with eyes. Wear appropriate eye wear if necessary.
OTHER PROTECTIVE EQUIPMENT:	Not required under normal use conditions.
VENTILATION:	For outdoor use. If indoors, use adequate ventilation.
NOTE:	Personal protection information provided in this Section is based upon label information as to normal uses and conditions. Where special or unusual uses or conditions exist, it is suggested that the expert assistance of an industrial hygienist or other qualified professional be sought.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Aerosol canister
ODOR	Mild fruity odor.
MOLECULAR WEIGHT	Not applicable for end-use aerosol.
pH	Not applicable for end-use aerosol.
SOLUBILITY IN WATER	Not applicable for end-use aerosol.
BOILING POINT	Not applicable for end-use aerosol.
MELTING POINT	Not applicable for end-use aerosol.
FLASH POINT	Aerosol flame projection is 15 to 45 cm, with no flashback

FLAMMABILITY	Flammable. Contents are under pressure. Exposure to temperatures above 130°F may cause bursting.
SPECIFIC GRAVITY (H_2O = 1)	0.96
EXPLOSIVE PROPERTIES	Not applicable for end use aerosol.
OXIDIZING PROPERTIES	Not applicable for end-use aerosol

10. STABILITY AND REACTIVITY DATA

STABILITY: The product is stable at recommended storing conditions and for the use under the conditions reported in the label. No hazardous reactions are expected.

INCOMPATIBILITY: Pheromone to strong oxidizing agents. Canister to heat or open flame.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition products of combustion may include: Hydrogen fluoride, carbon oxides, fluorocarbons, carbonyl fluoride and halogenated compounds.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Due to the formulation type, no studies have been performed on the end-use product.
Information about the pheromone active ingredients is reported here:

Codling Moth (CM) Pheromone:

LD_{50}, Oral, Rat:	> 5050 mg/kg
LD_{50}, Dermal, Rabbit:	> 2020 mg/kg
LD_{50}, Intratracheal, Rat:	> 2 mg//L
Eye Irritation, Rabbit:	Mildly irritating.
Skin Irritation, Rabbit:	Moderately irritating.
Ames Mutation Assay:	Negative.
Sensitization, Guinea Pig:	Negative.
Carcinogenicity:	No data found
Reproductive toxicity:	No data found
Target organ toxicity:	No data found

Oriental Fruit Moth (OFM) Pheromone Blend:

LD_{50}, Oral, Rat:	> 5050 mg/kg
LD_{50}, Dermal, Rabbit:	> 5050 mg/kg
LD_{50}, Intratrachael, Rat:	> 2 mg//L
Eye Irritation, Rabbit:	Mildly irritating.
Skin Irritation, Rabbit:	Moderately irritating.
Ames Mutation Assay:	Negative.
Sensitization, Guinea Pig:	No data found
Carcinogenicity:	No data found
Reproductive toxicity:	No data found
Target organ toxicity:	No data found

12. ECOLOGICAL INFORMATION

Due to the formulation type, no studies have been performed on the end-use product.
Information about the pheromone active ingredients is reported here:

Codling Moth (CM) Pheromone:

Acute Avian LD_{50} Bobwhite Quail:	> 2050 mg/kg
Acute Fish 96 Hour LC_{50} Rainbow Trout:	> 5.87 mg/L
Aquatic Invertebrate 48 Hour EC_{50} *Daphnia*	> 8.6 mg/L

Oriental Fruit Moth (OFM) Pheromone Blend:

Acute Avian LD_{50} Bobwhite Quail:	> 2050 mg/kg
Acute Fish 96 Hour LC_{50} Rainbow Trout:	> 0.99 mg/L
Aquatic Invertebrate 48 Hour EC_{50} *Daphnia*	> 100 mg/L

13. DISPOSAL CONSIDERATIONS

ENVIRONMENTAL HAZARDS:

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.

CONTAINER DISPOSAL:

Do not puncture or incinerate. Nonrefillable container. Do not reuse or refill this container. If can is empty: Remove from cabinet, place in trash or offer for recycling. If partly filled: Call your local solid waste facility for disposal instructions.

14. TRANSPORT INFORMATION

TRANSPORT BY GROUND:

Description:	Aerosols, flammable, (each not exceeding 1 L capacity)
Hazard Class:	2.1
Identification Numbers:	UN1950
Packing Group:	Not Applicable

TRANSPORT BY AIR:

Description:	Aerosols, flammable
Hazard Class:	2.1
Identification Numbers:	UN1950
Hazard Label(s):	Flammable gas
Packing Group:	Not Applicable

15. REGULATORY INFORMATION

This product is a pesticide 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 safety data sheets (SDSs), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including the Directions for Use.

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

U.S. EPA Registration Number 73479-14
Product is categorized under U.S. EPA Toxicity Health Hazard Category III – CAUTION

16. OTHER INFORMATION

> While this information and recommendations set forth are believed to be accurate as of the date hereof, Suterra LLC makes no warranty with respect hereto and disclaims all liability from reliance thereon.

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Preparer: R. Trager