



SAFETY DATA SHEET

SECTION I – IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

TRADE NAME:	CheckMate® DBM-F
SYNONYMS:	Sprayable DBM mating disruption formulation.
USE:	CheckMate® DBM-F is a sprayable aqueous suspension of microbead dispensers each encapsulating the synthesized sex pheromone of the diamondback moth (<i>Plutella xylostella</i>). The product is used in agriculture to control populations of this pest 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

SECTION II – 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 eye irritation
 Causes skin irritation

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.

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 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.

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.

SECTION III - COMPOSITION

PRINCIPAL COMPONENT(S)	CAS NO.	CHEMICAL FORMULA	APPROXIMATE W/W %
(Z)-11-Hexadecen-1-yl acetate	34010-21-4	C ₁₈ H ₃₄ O ₂	11
(Z)-11-Hexadecenal	53939-28-9	C ₁₆ H ₃₀ O	11
Water	7732-18-5	H ₂ O	>72

SECTION IV – FIRST AID MEASURES

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 further treatment 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.

SECTION V – FIREFIGHTING MEASURES

FLASH POINT (Method Used)	FLAMMABLE LIMITS (% by Volume in Air)	LEL	UEL
Not established for formulation. 230°F for pheromone active ingredients.	Not established.	Not established.	Not established.
EXTINGUISHING MEDIA: Not applicable. Formulation > 72% water. If water boils off use the following: Dry Chemical, Foam, Carbon Dioxide (CO ₂).			

UNUSUAL FIRE AND EXPLOSION HAZARDS:		None.
ADVICE FOR FIREFIGHTERS:		Evacuate area of all unnecessary personnel. Use standard fire fighting procedures. Carbon oxides formed when burned.
SECTION VI – ACCIDENTAL RELEASE MEASURES		
Wear protective gloves, clothing and eye protection. Contain spill by diking. Use absorbent and shovel into a clean container. Protect from ignition. Keep out of water sources or sewers.		
SECTION VII – HANDLING AND STORAGE		
Store in a cool, well ventilated area until used. Protect from freezing. Protect from ignition. Wear protective equipment described in Section VIII. Avoid skin and eye contact. Avoid breathing vapors. Wash hands after handling. Do not allow product to contaminate water sources, food or feed. Provide means of controlling spills.		
SECTION VIII – EXPOSURE CONTROLS / PERSONAL PROTECTION		
EXPOSURE LIMIT VALUES		
RECOMMENDED EXPOSURE LIMITS:		None established.
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:	Minimally irritating for the active ingredient pheromone blend. Avoid contact with eyes.	
SKIN CONTACT:	Moderately irritating for the active ingredient pheromone blend. Avoid contact with skin.	
INHALATION:	May cause transient irritation. Avoid breathing vapors when in confined areas.	
INGESTION:	Due to product form ingestion is not considered likely. May cause upset stomach in large doses. Avoid ingesting product.	
CHRONIC:	Long-term studies have not been done on the concentrated active ingredient, however, no adverse effects expected from use of product.	
EXPOSURE CONTROLS		
RESPIRATORY PROTECTION:	Not generally required under normal use conditions. If heated and/or pheromone becomes aerosolized, use NIOSH/MSHA approved air-purifying respirator with organic vapor sorbent. Use NIOSH/MSHA approved respiratory protection, such as air-supplied mask, for entry into confined spaces or other poorly ventilated areas.	
PROTECTIVE GLOVES:	Use protective gloves.	
EYE PROTECTION:	Wear protective eyewear.	
OTHER PROTECTIVE EQUIPMENT:	Wear protective garments to prevent excessive skin contact.	
VENTILATION:	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.	

SECTION IX –PHYSICAL AND CHEMICAL PROPERTIES	
APPEARANCE	Solid microcapsules containing DBM pheromone blend in aqueous suspension.
ODOR	Oily, fruity odor.
MOLECULAR WEIGHT	Not applicable for end-use formulation.
pH	Not established for end-use formulation.
SOLUBILITY IN WATER	Not applicable for end-use product which consists of microcapsules in an aqueous suspension. Low solubility for DBM pheromone blend.
BOILING POINT	Not established for end-use formulation. 140 °C @ 0.1 mmHg for (Z)-11-Hexadecen-1-yl acetate. 130 °C @ < 0.1 mmHg for (Z)-11-Hexadecenal.
MELTING POINT	Not established for end-use formulation. DBM pheromone blend is a liquid at room temperature.
FLASH POINT	Not established for end-use formulation. 230°F for DBM pheromone blend.
FLAMMABILITY	Not established.
SPECIFIC GRAVITY (H ₂ O = 1)	0.98 for end-use formulation. 0.8690:0.8740 @ 25°C for (Z)-11-Hexadecen-1-yl acetate. 0.8420:0.8500 @ 25°C for (Z)-11-Hexadecenal.
EXPLOSIVE PROPERTIES	Not established
OXIDIZING PROPERTIES	Contains no oxidizing/reducing agents.
SECTION X – STABILITY AND REACTIVITY DATA	
STABILITY:	The product is stable. No dangerous reactions are known or expected from the use of the formulation as labeled.
INCOMPATIBILITY:	None. Formulation is stable to heat and UV-light as packaged. Formulation will degrade in the presence of strong oxidizing agents and oxygen. Pheromone is sensitive to heat and light.
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon oxides formed when burned.
HAZARDOUS POLYMERIZATION:	Will not occur.
SECTION XI – TOXICOLOGICAL INFORMATION	
<p>Due to the formulation type, no studies have been performed on the end-use product. Information about the pheromone blend is reported here:</p> <p>Specific test values not established for pheromone blend. Using the U.S. EPA Straight-Chained Lepidopteran Pheromone (SCLP) similarity argument, the toxicity of the subject pheromone blend is placed into EPA toxicity category III-IV: CAUTION. The oral and dermal toxicity is estimated to be > 5,000 mg/Kg and > 2,000 mg/Kg. Eye and skin irritation is estimated to be minimal to moderate, respectively.</p> <p>This SCLP active ingredient blend is exempted from the requirement of a tolerance on food and feed (40 CFR § 180.1153 / Federal Register 71: 45395-45400 August 9, 2006).</p>	
SECTION XII – ECOLOGICAL INFORMATION	
<p>Due to the formulation type, no studies have been performed on the end-use product. The ecological toxicity of the pheromone attractants is similar to the toxicity of other Straight-Chain Lepidopteran pheromones (SCLPs). Comparison with chemically similar synthetically produced replicas of naturally occurring SCLPs indicate little, if any, non-target organism toxicity, and no significant environmental fate concerns for soil, water or air. Adverse effects on non target organisms (mammals, birds, and aquatic organisms) are not expected because the pheromone attractant blend is released in very small amounts to the environment and acts only on select species of insects.</p>	

SECTION XIII – DISPOSAL CONSIDERATIONS

ENVIRONMENTAL HAZARDS / WASTE DISPOSAL:

DO NOT contaminate water, food, or feed by storage and disposal.

For terrestrial uses. DO NOT apply directly to water, or to areas where surface water is present, or to intertidal areas below the high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not contaminate water when disposing of equipment washwater. Dispose of in accordance with local, state, and federal regulations.

CONTAINER DISPOSAL:

Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty remaining contents into application equipment or mix tank. Fill container 1/4 full with water. Replace and tighten closures. Tip the container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and or dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities by burning. If burned, stay out of smoke.

SECTION XIV – TRANSPORT INFORMATION

TRANSPORT BY GROUND:

Description:	Solid microcapsules containing pheromone in an aqueous suspension.
Hazard Class:	Not applicable – Not classified as dangerous.
Identification Numbers:	Unclassified.
Packing Group:	Not applicable.
Flashpoint:	Not established for end-use formulation. Formulation is > 72% water. 230°F for DBM pheromone blend.

TRANSPORT BY SEA:

Description:	Solid microcapsules containing pheromone in an aqueous suspension.
Hazard Class:	IMDG – Not classified as dangerous.
Identification Numbers:	Unclassified.
Packing Group:	Not applicable.
Flashpoint:	Not established for end-use formulation. Formulation is > 72% water. 230°F for DBM pheromone blend.

TRANSPORT BY AIR:

Description:	Solid microcapsules containing pheromone in an aqueous suspension.
Hazard Class:	Not applicable – Not classified as dangerous.
Identification Numbers:	Unclassified.
Packing Group:	Not applicable.
Flashpoint:	Not established for end-use formulation. Formulation is > 72% water. 230°F for DBM pheromone blend.

SECTION XV – REGULATORY INFORMATION

REGULATORY LICENSE:

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

Personal Protective Equipment (PPE): Applicators and other handlers must wear long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

U.S. EPA Registration Number 56336-35

Product is categorized under U.S. EPA Toxicity Health Hazard Category III-IV – CAUTION. This crop protection product is also registered for sale in Mexico.

SECTION XVI – 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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