

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION-1 : SUPPLIER AND PRODUCT INFORMATION

HARMONY ECOTECH PVT. LTD.

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PRODUCT NAME:	HELICOVERPA ARMIGERA (Cotton Bollworm) PHEROMONE LURE
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SECTION-2 : HAZARDS IDENTIFICATION FOR ACTIVE INGREDIENTS

Emergency Overview	May be irritating to skin and eyes.
HMIS Rating	Health – 1
	Flammability – 1
	Reactivity – 0

SECTION-3 : COMPOSITION / INFORMATION ON INGREDIENTS

The following pheromone ingredients are loaded into a rubber septum.

Chemical Name	CAS #	Molecular formula
Z-11-Hexadecenal	53939-28-9	C ₁₆ H ₃₀ O
Z-9-Hexadecenal	56219-04-6	C ₁₆ H ₃₀ O

SECTION-4 : FIRST AID MEASURES FOR ACTIVE INGREDIENTS

Oral Exposure	Rinse your mouth with sufficient water.
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Inhalation Exposure	If inhaled, move to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.
Dermal Exposure	In case of skin contact resulting in irritation flush with copious amounts of water for at least 15 min.
Eye Exposure	In case of contact with eyes, resulting in irritation, flush with copious amount of water for at least 15 min. Assure adequate flushing by separating the eyelids with fingers.

SECTION-5 : FIRE FIGHTING MEASURES

Flash Point	N/A
Auto Ignition Temperature	N/A
Flammability	N/A
Extinguishing Media	Carbon dioxide, dry chemical powder or appropriate foam.
Fire Fighting - Protective Equipment	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s)	Not easily combustible. Emits low degree toxic fumes under fire conditions.

SECTION-6 : ACCIDENTAL RELEASE MEASURES

Procedure to be followed in case of leak or spill	Evacuate area.
Procedure(s) of personal precaution(s)	Wear self contained breathing apparatus, rubber boots and heavy rubber gloves.
Methods for cleaning up	Cover with dry lime or soda ash, pick up and keep in a closed container for disposal. Ventilate area and wash spill site after

material pickup is complete.

SECTION-7 : HANDLING AND STORAGE

Handling	Keep the Container tightly closed. Do not breathe vapours.
Storage	Keep away from heat, sparks and open flame, store in a cool dry place away from sun light.

SECTION-8 : EXPOSURE CONTROLS / PPE

Engineering Controls	No open flames.
Personal Protective Equipment	At a minimum, workers should wear a NIOSH-approved full face air purifying respirator.
Hand	Compatible chemical resistant gloves recommended for prolonged handling.
Eye	Chemical Safety goggles.
General Hygiene Measures	Wash contaminated clothing before reuse. Wash thoroughly after handling.

SECTION-9 : PHYSICAL / CHEMICAL PROPERTIES

Appearance	Pink / Dark red colour rubber septum containing active ingredient.
Boiling point of active ingredient	333.5°C at 760 mmHg
Density of active ingredient	0.9g/cm ³

SECTION-10 : STABILITY AND REACTIVITY

Stability	Stable.
Materials to avoid	The performance of this product may be affected by strong oxidizing agents.
Hazardous Decomposition Products	N.A.

Hazardous polymerization	Has not been reported.
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SECTION-11 : TOXICOLOGICAL INFORMATION

Skin Contact	Product might cause skin irritation upon prolonged contact.
Skin Absorption	Product absorbed through the skin upon prolonged contact.
Eye Contact	Product causes eye irritation if directly rubbed in eye.
Inhalation	Product difficult to inhale. But emitted odours may cause irritation.
Ingestion	May be harmful if swallowed.
Signs and Symptoms of Exposure	To the best of our knowledge, the chemical, physical and toxicological properties of the active ingredients have not been thoroughly investigated
Toxicity Data	No data available.

SECTION-12 : ECOLOGICAL INFORMATION

No data available.

SECTION-13 : DISPOSAL CONSIDERATIONS

Appropriate Method of Disposal of Substance or Preparation	Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent to burn in a chemical incinerator. Observe all federal, state, and local environmental laws.
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SECTION-14 : TRANSPORT INFORMATION

DOT	None
IATA	None
Sea (IMDG)	None

SECTION-15 : REGULATORY INFORMATION

European Information	Based on toxicological studies in the published literature, there is no risk and safety phrase to assign for this product.
United States Regulatory Information	The active ingredients are listed in the following inventories: TSCA, NSDL, ECL, EINECS (252-397-7)
Listed as carcinogen by NTP, IARC or OSHA	No

SECTION-16 : OTHER INFORMATION

HMIS® Hazardous Materials Identification System	HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used only in conjunction with a fully implemented HMIS® program by workers who have received appropriate HMIS® training. HMIS® is a registered trade and service mark of the NPCA.
Acronyms	NTP (National Toxicology Program); IARC (International Agency for Research on Cancer); OSHA (Occupational Health and Safety Administration); DOT (U.S. Dept. of Transportation)
Disclaimer	Only for use in crops.

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