Conforms to HazCom 2012/United States

SAFETY DATA SHEET

Preferal*

Microbial Insecticide

Section 1. Identification

Product Name: Preferal*
EPA Registration No.: 70051-19-67690
Product Type: Microbial Insecticide
Active Ingredient: *Isaria fumosorosea* Apopka Strain 97
CAS No.: None

Relevant Identified uses of the substance or mixture and uses advised against

Identified uses: Biocontrol of insects and mites.
Uses advised against: Any use not listed on the label

Details of the supplier of the safety data sheet

Supplier's details:

SePRO Corporation
11550 North Meridian Street
Suite 600
Carmel, IN 46032 U.S.A.
Tel: 317-580-8282
Toll free: 1-800-419-7779
Fax: 317-580-8290
Monday - Friday, 8am to 5pm E.S.T.
www.sepro.com

Emergency telephone number: INFOTRAC - 24-hour service 1-800-535-5053

The following recommendations for exposure controls and personal protection are intended for the manufacture, formulation and packaging of this product. For applications and/or use, consult the product label. The label directions supersede the text of this Safety Data Sheet for application and/or use.

Section 2. Hazards identification

Classification of the substance or mixture

Hazard Classification: Not classified by OSHA

EPA Signal Word: Caution (see section 15)

Hazard Statements: None

Pictogram: None

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

Other Hazards: For outdoor non-greenhouse use do not apply when bees are actively foraging. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate. Do not allow contamination of or discharge into lakes, ponds, or public waterways. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Apply this product only as specified in the label.

Section 3. Composition/information on ingredients

Substances

Component	CAS #	% by weight
Isaria fumosorosea Apopka Strain 97	None	20

Section 4. First aid measures

Description of first aid measures

Generic measures

Skin Contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call poison control center or doctor for treatment advice. If product is diluted in accordance with the directions for use, gets on skin medical attention is not required.
Have product container or label with you when calling poison control or doctor or going for treatment.

Most important symptoms and effects, both acute and delayed None specified

Indication of any immediate medical attention and special treatment needed None specified

Section 5. Fire-fighting measures

Extinguishing media
Suitable Extinguishing Media: Water mist, alcohol resistant foam, dry powder, carbon dioxide

Unsuitable Extinguishing Media: None known

Special hazards arising from the substance or mixture

Hazardous combustion products: None known

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Advice for firefighters

Protection of Firefighters: None specified

Section 6. Accidental release measures

Personal precautions. Protective equipment and emergency procedures

For non-emergency personnel: See section 8 for personal protection equipment
For emergency responders: See section 8 for personal protection equipment

Environmental precautions For outdoor non-greenhouse use do not apply when bees are actively foraging. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate. Do not allow contamination of or discharge into lakes, ponds, or public waterways. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Apply this product only as specified in the label.

Methods and material for containment and cleaning up

Methods for Containment: Recover free product. Use absorbent material to minimize runoff of product or mixed product.

Methods for Clean-Up: Sweep up and place in a chemical container. Seal the container and handle in an approved manner. Do not allow wash water to contaminate water supplies. Dispose of in accordance with Federal State and local regulations for disposal of non-hazardous waste.

Reference to other sections See Section 8 for occupational exposure limits and risk management measures. Refer to Section 13 for disposal considerations.

Section 7. Handling and storage

Precautions for safe handling Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing/PPE immediately if pesticides got inside. Then wash thoroughly and put on clean clothing.
Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Conditions for safe storage, including any incompatibilities Keep unopened product refrigerated (40-50°F) and dry. Seal out moisture from unused material by closing the bag tightly after squeezing out excess air. Keep used product refrigerated in original package and use within 30 days after opening.

Specific end use(s) Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

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Section 8. Exposure controls/personal protection

Control parameters

OSHA Permissible Exposure Limits (PELs): Not Determined

ACGIH Threshold Limit Values: Not Determined

Other Exposure Limits: Not Determined

Exposure Controls

Engineering Controls: None specified

Personal Protective Equipment

Eye/Face Protection: None specified

Skin Protection: Long sleeved shirt, long pants, Shoes plus socks

Hand Protection: None specified

Body Protection: Long sleeved shirt, long pants, Shoes plus socks

Respiratory Protection: Mixers, loaders, applicators and other handlers must wear a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21 C) or a NIOSH approved respirator with prefix N-95, R-95 or P-95.

Follow manufactures 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.

Thermal Hazards: None known

General Hygiene Considerations: Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Remove clothing/PPE immediately if pesticides got inside. Then wash thoroughly and put on clean clothing.

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental exposure controls: For outdoor non-greenhouse use do not apply when bees are actively foraging. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate. Do not allow contamination of or discharge into lakes, ponds, or public waterways. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Apply this product only as specified in the label.

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Section 9. Physical and chemical properties

Appearance:	Tan granule
Odor:	Bran
Odor Threshold:	Not determined
pH 1% dilution:	6.3 - 6.9
Melting Point/Freezing Point:	Not applicable
Initial Boiling Point:	Not applicable
Boiling Range:	Not applicable
Flash Point:	Not determined
Evaporation Rate:	Not applicable
Flammability (solid, gas):	Not determined
Lower & Upper Flammability Limits:	Not determined
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable
Density:	0.42 – 0.46 g/cc
Solubility:	Not determined
Partition Coefficient (n-octanol water):	Not determined
Auto-ignition Temperature:	Not determined
Decomposition Temperature:	Not determined
Viscosity:	Not applicable
Explosive Properties:	Not determined
Oxidizing Properties:	Not determined
Other information	Not available

Section 10. Stability and reactivity

Reactivity	None known
Chemical stability	Stable
Possibility of hazardous reactions	None known
Conditions to avoid	Warm temperatures reduce efficacy
Incompatible materials	None known
Hazardous decomposition products	None known

Section 11. Toxicological information

Information on toxicological effects

Acute Toxicity

Toxicological information on the substance or mixture:

LD50 (oral)	No toxicity or pathogenicity at an oral dose of 1.7×10^6 CFU/g
LD50 (dermal)	No evidence of systemic toxicity at a dose of 2g/animal
LC50 (inhalation)	No toxicity or pathogenicity at an intratracheal dose of 10^6 CFU/g
Skin corrosion/irritation:	Slightly irritating
Eye irritation:	Slightly and reversibly irritating
Respiratory/skin sensitization:	Not a dermal sensitizer

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Other information on adverse health effects:

Carcinogenicity
NTP Listed: Not applicable
IARC Listed: Not applicable
OSHA: Not applicable

Section 12. Ecological information

Toxicity:

Test Species	Test Method	Test Substance	LC50
Northern bobwhite	Acute Tox 5 day	Active Ingredient	No evidence of toxicity or pathogenicity
Rainbow Trout *(Oncorhynchus mykiss)*	96-hour Static Acute	Active Ingredient	EC50 96-hour > 14.7 x 10^8 CFU/L
Daphnia magna	48-hour Static Acute	Active Ingredient	EC50 48-hour > 14.7 x 10^8 CFU/L
Apis mellifera	Oral and Contact Tox	Preferal	LD50 contact> 20 µg a.i./bee LD50 contact> 20 µg a.i./bee

Persistence and degradability Low persistence in soil.
Bioaccumulative potential No bioaccumulation expected
Mobility in soil No data available
Other adverse effects No data available

Section 13. Disposal considerations

Waste treatment methods
Disposal Instructions: Do not contaminate water, food, or feed by storage and disposal

Pesticide Storage: Keep unopened product refrigerated (40-50°F) and dry. Seal out moisture from unused material by closing the bag tightly after squeezing out excess air. Keep unused product refrigerated in the original package and use within 30 days after opening.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of onsite or at an approved waste disposal facility.

Container Handling: Non-refillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Section 14. Transport information

UN Number Not regulated.
UN proper shipping name Not regulated.
Transport hazard class(es) Not regulated.
Packing group Not regulated.
Environmental hazards Not regulated.
Special precautions for user Not regulated.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not regulated.

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Section 15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

EPA: This product is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticidal chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

Harmful if swallowed, inhaled, or absorbed through the skin. Causes moderate eye irritation.

OSHA: N/A
TSCA Status: Exempt
CERCLA Reportable Quantity: N/A
SARA Title III:
Section 302: N/A
Section 311/312: N/A
Section 313: N/A
RCRA Status: N/A

Section 16. Other information

SDS Authoring Information:

Date of issue: 08/11/2015

SDS Prepared by: SePRO Corporation

Notice to reader
To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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