

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

**Product name:** PFR-97 20% WDG  
**EPA Registration No.** 70051-19  
**Product Type:** Microbial Insecticide  
**Active Ingredient:** *Isaria fumosorosea* Apopka Strain 97  
**CAS No.:** None

**1.2. 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

**1.3. Details of the supplier of the safety data sheet**

**Name:** Certis U.S.A., LLC  
**Address:** 9145 Guilford Road, Suite 175  
Columbia, Maryland 21046  
U.S.A.  
**Phone Number:** +01 (800) 255-3924  
**Website:** <http://www.certisusa.com>

**1.4. Emergency telephone number**

**Emergency number:** +1 800 255-3924

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Hazard Classification:** Not classified by OSHA  
**EPA Signal Word:** Caution (see section 15)  
**Hazard Statements:** None  
**Pictogram:** None  
**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.

**2.2 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**

**3.1 Substances**

Component	CAS#	% by weight
<i>Isaria fumosorosea</i> Apopka strain 97*	None	20

**SECTION 4: First aid measures**

**4.1. 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.

**4.2. Most important symptoms and effects, both acute and delayed**

None specified

**4.3. Indication of any immediate medical attention and special treatment needed**

None specified

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable Extinguishing Media:** Water mist, alcohol resistant foam, dry powder, carbon dioxide  
**Unsuitable Extinguishing Media:** None known

**5.2. Special hazards arising from the substance or mixture**

**Hazardous combustion products:** None known

**5.3. Advice for firefighters**

**Protection of Firefighters:** None specified

**SECTION 6: Accidental release measures**

**6.1. 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

**6.2. 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.

**6.3. 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.

**6.4. 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**

**7.1. 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.

**7.2. 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.

**7.3. 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.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**OSHA Permissible Exposure Limits (PELs):** Not determined

**ACGIH Threshold Limit Values:** Not determined

**Other Exposure Limits:** Not determined

**8.2. 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-21C) 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.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

<b>Appearance:</b>	Tan granule
<b>Odour:</b>	Bran
<b>Odour Threshold:</b>	Not determined
<b>pH 1% dilution:</b>	6.3-6.9
<b>Melting Point / Freezing Point:</b>	Not applicable
<b>Initial Boiling Point:</b>	Not applicable
<b>Boiling Range:</b>	Not applicable
<b>Flash Point:</b>	Not determined
<b>Evaporation Rate:</b>	Not applicable
<b>Flammability (solid, gas):</b>	Not determined
<b>Lower &amp; Upper Flammability Limits:</b>	Not determined
<b>Vapour Pressure:</b>	Not applicable
<b>Vapour Density:</b>	Not applicable
<b>Density:</b>	0.42-0.46 g/cc
<b>Solubility:</b>	Not determined
<b>Partition Coefficient (n-octanol/water):</b>	Not determined
<b>Auto-ignition Temperature:</b>	Not determined
<b>Decomposition Temperature:</b>	Not determined
<b>Viscosity:</b>	Not applicable
<b>Explosive Properties:</b>	Not determined
<b>Oxidising Properties:</b>	Not determined

**9.2. Other information** None

Not available.

**SECTION 10: Stability and reactivity**

<b><u>10.1. Reactivity</u></b>	None known
<b><u>10.2. Chemical stability</u></b>	Stable
<b><u>10.3. Possibility of hazardous reactions</u></b>	None known
<b><u>10.4. Conditions to avoid</u></b>	Warm temperatures reduce efficacy
<b><u>10.5. Incompatible materials</u></b>	None known
<b><u>10.6. Hazardous decomposition products</u></b>	None known

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Acute Toxicity**

Toxicological information on the substance or mixture:

<b>LD<sub>50</sub> (oral)</b>	No toxicity or pathogenicity at an oral dose of $1.7 \times 10^6$ CFU/g
<b>LD<sub>50</sub> (dermal)</b>	No evidence of systemic toxicity at a dose of 2g/animal
<b>LC<sub>50</sub> (inhalation)</b>	No toxicity or pathogenicity at an intratracheal dose of $10^6$ CFU/g
<b>Skin corrosion / irritation:</b>	Slightly irritating
<b>Eye irritation:</b>	Slightly and reversibly irritating.
<b>Respiratory or skin sensitization:</b>	Not a dermal sensitizer.

**Other information on adverse health effects:**

**Carcinogenicity**

<b>NTP Listed:</b>	Not applicable
<b>IARC Listed:</b>	Not applicable
<b>OSHA:</b>	Not applicable

**11.2 Reference to other sections**

See Section 4 for symptoms and acute and delayed effects.

**SECTION 12: Ecological information**

**12.1. Toxicity:**

Test species	Test method	Test substance	LC <sub>50</sub>
Northern bobwhite	Acute Tox 5 day	Active Ingredient	No evidence of toxicity or pathogenicity
Rainbow Trout ( <i>Oncorhynchus mykiss</i> )	96-hour Static Acute	Active Ingredient	EC <sub>50</sub> 96-hour > $14.7 \times 10^8$ CFU/L
<i>Daphnia magna</i>	48-hour Static Acute	Active Ingredient	EC <sub>50</sub> 48-hour > $14.7 \times 10^8$ CFU/L
<i>Apis mellifera</i>	Oral and Contact Tox	PFR-97 20% WDG	LD <sub>50</sub> contact > 20 µg a.i./bee LD <sub>50</sub> oral > 21.63 µg a.i./bee

**12.2. Persistence and degradability**

Low persistence in soil.

<b><u>12.3. Bioaccumulative potential</u></b>	No bioaccumulation expected.
<b><u>12.4. Mobility in soil</u></b>	No data available.
<b><u>12.5. Other adverse effects</u></b>	No data available

**SECTION 13: Disposal considerations**

**13.1. 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: Transportation information**

<b><u>14.1. UN number</u></b>	<b><u>14.2. UN proper shipping name</u></b>
Not regulated.	Not regulated.
<b><u>14.3. Transport hazard class(es)</u></b>	<b><u>14.4. Packing group</u></b>
Not regulated.	Not regulated.
<b><u>14.5. Environmental hazards</u></b>	<b><u>14.6. Special precautions for user</u></b>
Not regulated.	Not regulated.
<b><u>14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</u></b>	
Not regulated.	

**SECTION 15: Regulatory information**

**15.1. 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**

**Disclaimer:**

To the best of our knowledge, the information contained herein is accurate. However, neither Certis USA nor any of its subsidiaries assume 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 material may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

**SDS Authoring Information:**

**Revision date:** March 23, 2015  
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**SDS Prepared by:** Certis U.S.A. L.L.C.