SAFETY DATA SHEET

BioCeres® WP
Biological Mycoinsecticide

Section I: IDENTIFICATION

Product identifier on the label	BioCeres® WP
Registration #	89600-2
Trade Name & Synonyms	BioCeres® WP
Manufacturer	**Anatis Bioprotection, Inc.** 278, rang Saint-André St-Jacques-le-Mineur (QC), Canada JOJ 1Z0 1-800-305-7714 tel. 514-485-0323 fax
Emergency telephone	Poison Control: 1-800-222-1222

Section II HAZARDS IDENTIFICATION, CLASSIFICATION

Non-hazardous

Moderate but temporary eye irritant
Potential Allergen
Potential Skin sensitisation
Potential Airway sensitisation

Substance contributing to the classification: A.I. *Beauveria bassiana*, strain ANT-03

Section III COMPOSITION/INFORMATION ON INGREDIENTS

Active Ingredient (A.I.)	*Beauveria bassiana*, strain ANT-03 CAS# (A.I.) 63428-82-0
Formula Contains	20% *Beauveria bassiana*, strain ANT-03 80% inerts

Section IV FIRST AID MEASURES

If in eye: Hold open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
If on skin: Take off contaminated clothing. Rinse immediately with running water 15-20 minutes. Wash the area exposed with soap.

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If inhaled: Move person to fresh air. If person is not breathing, call first aid responder, then give artificial respiration preferably mouth-to-mouth.
If swallowed: Call a poison control center or doctor 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Treat symptomatically.

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

Section V: FIRE-FIGHTING MEASURES

Product is non-flammable under normal conditions of storage, manipulation and use.
Extinguishing measure: In case of inflammation, use tap-water.
Hazardous combustion products development: None.
Act in accordance with the corporate`s emergency plan.

Section VI ACCIDENTAL RELEASE MEASURES

Remove persons not wearing protective clothing from spill area;
Wear personal protection equipment against potential contact with the spilt product when working on stopping the release/repairing the leak;
Protect streams and sewers from contamination.

Physicochemical properties allow usage of any absorbent material.

Section VII HANDLING AND STORAGE

Precaution for safe handling Comply with the current legislation concerning the prevention of industrial risks;
Wear personal protective equipment to avoid inhalation, contact with skin and eyes.

Precaution for safe storage
Keep container hermetically sealed preventing humidity penetration;
Keep separate from food and animal fed.

Technical recommendations to prevent ergonomic and toxicological risks
Wash hands before eating, drinking, chewing gum, using tobacco or using toilet;
Remove clothing immediately if product gets inside, then clean thoroughly and put on clean clothing;
Keep out of reach of children.

Technical recommendations to prevent environmental risks
The product is considered safe for the environment.
It is suggested to limit spreading during pollination period;

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DO NOT apply this product to fresh water habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, and wetlands) and estuarine/marine habitats.
DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
Have handy an emergency plan to limit drainage into sewages and stream.

Conditions for safe storage, including any incompatibilities:
Technical measures for storage: Keep storage temperature cool, ideally refrigerated 4 ºC
Dry environment;
Keep container sealed
Avoid penetration of humidity in the mixture
Away from direct sunlight (UV) and heat;
Maximum time: 6 months at room temperature
18 months at 4 ºC
General conditions for storage: Separated from food storage
Specific end use(s): No special recommendation.

Section VIII EXPOSURE CONTROLS/PERSONAL PROTECTION WHEN HANDLING AND SPRAYING

There are no environmental limits for the substances contained in the product.

Respiratory protection: Masks tested and approved under appropriate government standards NIOSH/OSHA for vapors and dust (eg. Filter N-95, P-95).
Ventilation system: Local exhaust.
Eye protection: Protective goggles.
Skin protection: Gloves, waterproof and chemical resistant.
Other protective equipment: Long-sleeved shirt, long pants, shoes and socks.

Section IX PHYSICAL AND CHIMICAL PROPERTIES

Appearance and odor	Fine white powder, odorless
Solubility in water (% by weight)	Not relevant due to the nature of the product
Specific gravity at 22ºC (g/cm^3)	0.506

Volatility:

Boiling point at atmospheric pressure	Not relevant due to the nature of the product
Vapor pressure at 20 ºC	Not relevant due to the nature of the product
Vapor pressure at 50 ºC	Not relevant due to the nature of the product
Evaporation rate at 20 ºC	Not relevant due to the nature of the product

Product description:

Density at 20 ºC	Not relevant due to the nature of the product
Relative density at 20 ºC	Not relevant due to the nature of the product
Dynamic viscosity at 20 ºC	Not relevant due to the nature of the product
Kinematic viscosity at 20 ºC	Not relevant due to the nature of the product

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Kinematic viscosity at 40 ºC	Not relevant due to the nature of the product
Concentration	Minimum of $1x10^{10}$ conidia/g
pH	Not relevant due to the nature of the product
Partition coefficient n-octanol/water 20 ºC	Not relevant due to the nature of the product
Decomposition temperature	Not relevant due to the nature of the product

Flammability:

Flash Point	Not relevant due to the nature of the product
Autoignition temperature	Not relevant due to the nature of the product
Lower flammability limit	Not relevant due to the nature of the product
Upper flammability limit	Not relevant due to the nature of the product

Section X **STABILITY AND REACTIVITY**

Chemical stability	Stable under recommended storage conditions
Unusual fire hazards	None
Unusual explosion hazards	None
Incompatibility	Strong acids, strong bases
Condition to avoid	Heat
Material to avoid	No data available
Hazardous decomposition products	None

Section XI TOXICOLOGICAL INFORMATION

Likely routes of exposure

Eye contact	Yes	Ingestion	Yes
Inhalation	Yes	Skin	Yes, only if skin are cut

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	May cause moderate eye irritation.	Ingestion	May be harmful if swallowed.
Inhalation	May cause sensitization.	Skin	May cause irritation; May sensitization.

Effects

Immediate: Moderate but temporary eye irritation. May cause skin irritation.
Delayed: Unavailable information.
Chronic short term exposure: Unavailable information.
Chronic long term exposure: May cause skin and airways sensitisation.

ACUTE TOXICITY

Acute referral dosage: not required (2)

Criteria	Value/classification
Oral LD_{50} -rat- (CFU/animal)	$> 1.3 \times 10^9$ (1)
Dermal DL_{50} -rat- (mg/kg)	> 5,050 (1)
Pulmonary infectivity and toxicity LD_{50} -rat- (CFU/animal)	$> 1.1 \times 10^9$ (1)

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Ocular -rabbit-	Moderate irritant

CHRONIC TOXICITY ESTIMATES

Higher tier subchronic and chronic toxicity studies were not required because of the low acute toxicity of the MPCA

No indications of infectivity, toxicity or pathogenicity in the test animals treated in the Tier I acute oral and pulmonary toxicity/infectivity tests.

Criteria	Value/classification
Immune system -rodent-	Intact and able to process and clear the MPCA (1).
Endocrine system -animals-	No evidence suggesting *B. bassiana* has the potential to cause adverse effects (1). Exemption from the requirement of a tolerance (2).
Nervous system Carcinogenicity/mutagenicity and toxicity to reproduction Specific target organ toxicity-time or repeated- exposur	No evidence suggesting *B. bassiana* has the potential to cause such adverse effects. Long term studies not required.

Other specific toxicology information on the substances: Potential allergen.

Section XII ECOLOGICAL INFORMATION

Aquatic plants and algea: May be harmful. The manufacturer strongly suggests limiting applications to area beyond 50 feet from aquatic habitats.

Pollinators: Although shown no toxicity when used in accordance with label directions and good agricultural practices. The manufacturer strongly suggests limiting applications when actively foraging.

Insects other than pollinators: May be harmful.

Avian: Not toxic when used in accordance with label directions and good agricultural practices.

Plants, fruits and vegetables: No phytotoxicity.

Landfill: Non-toxic.

Results of persistent, bioaccumulative and toxic and/or very persistent and very bioaccumulative: Not applicable due to the nature of the product.

Persistence and degradability: Not available.

Bioaccumulation potential: Not applicable due to the nature of the product.

Mobility in soil: Minimal.

Other adverse effects: No data available.

DO NOT apply this product to fresh water habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, and wetlands) and estuarine/marine habitats.

Section XIII DISPOSAL CONSIDERATION

This MSDS information is accurate to the best knowledge of Anatis Bioprotection, Inc. Anatis Bioprotection, Inc. does not assume any legal responsibility for reliance upon same.

Check with your local waste management authority, environmental agency or health department to find out whether your community has a household waste collection program or a similar program for getting rid of leftover biopesticides;

Not recommended to disposal large amount down the drain.

Do not reuse as a container;
Non-toxic landfill, then triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by local authorities.

Section XIV TRANSPORT INFORMATION

Not dangerous goods;
Not regulated for transport (International Air Transport Association, International Maritime Dangerous Good, Department of Transportation, US).

Section XV REGULATORY INFORMATION

Not WHMIS controlled.

SECTION XVI OTHER INFORMATION

This safety data sheet has been designed in accordance with Occupational Safety and Health Administration, Appendix D to § 1910.1200-Safety Data Sheets.

References

(1) Pest Management Regulatory Agency, 2014. Proposed Registration Document PRD2014-06: strain ANT-03 de *Beauveria bassiana*. Health Canada, 7th of February 2014, 42 p.

(2) US EPA: United States Environmental Protection Agency, 2013). *Beauveria bassiana* strain ANT-03, Petition to establish an exemption from the requirement of a tolerance. EPA Biopesticides and Pollution Prevention Division, company notice of filing for pesticide petitions published in the federal register, Posted December 30, 2013, 7 p.

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