

BioBit® DF

Section 1: Identification of the Substance or Mixture and of the Supplier

Product name:	BioBit® DF
Other name:	<i>Bacillus thuringiensis (BT)</i> Insecticide
Recommended use:	An organic insecticide for the control of caterpillars on fruit, vegetable and ornamental crops.
Registered to:	Valent BioSciences Corporation 870 Technology Way Libertyville, Illinois, USA 60048
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Date of preparation:	8 May 2012

Section 2: Hazards Identification

Hazard classification (Transport):	Not a Dangerous Good for transport.
Hazardous substances:	6.4A (WARNING: May cause eye irritation). 9.1D (Biocidal against Lepidoptera. Do not apply in a way that adversely affects native Lepidoptera found only in region of application. Avoid contamination of water supply with product or container).

Section 3: Composition/Information on Ingredients

Classification & type:

Material	CAS No.	Proportion (%w)
<i>Bacillus thuringiensis</i> subsp <i>kurstaki</i>	68038-71-1	54%
Other ingredients determined not to be hazardous		46%

Section 4: First Aid Measures

Symptoms of exposure:	
	No adverse health effects expected if the product is handled in accordance with this SDS and the product label. Symptoms that may arise if the product is mishandled are:
If Swallowed	Non-toxic.
If in Eyes	Possible minor irritation.
If on Skin	Non-irritant.
If Inhaled	May result in minor irritation.

First aid actions:

If Swallowed	Do NOT induce vomiting. Contact at POISON CENTRE or doctor/physician 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	Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and wash before reuse. Wash affected areas with soap and water. If skin irritation occurs, get medical advice/attention.
If Inhaled	Remove to fresh air and keep in a position comfortable for breathing.

Workplace facilities: Eyewash facilities and safety shower.

Notes for medical personnel: Medical conditions aggravated by exposure – impaired respiratory function. Provide symptomatic/supportive care as necessary.

Section 5: Fire Fighting Measures

Type of hazard:	Not flammable.
HAZCHEM code:	N/A
Combustion products:	Unknown.
Extinguishing media & methods:	Use media suitable to flammable material concerned. Prevent runoff entering waterways.
Recommended protective clothing:	Regular protective clothing and self contained breathing apparatus.

Section 6: Accidental Release Measures

Personal protection:	See Section 8.3 for appropriate PPE. No particular equipment required.
Containment and clean up:	
FOR SPILLS ON LAND	
Containment	Avoid runoff into storm sewers or other bodies of water.
Cleanup	Recover product and place in an appropriate container for disposal. Avoid breathing dust. Ventilate and wash the spill area. Pick up wash liquid with additional absorbent and place in a chemical waste container.
FOR SPILLS IN WATER	
Containment	Avoid runoff into storm sewers or other bodies of water. Isolate contaminated water.
Cleanup	Remove contaminated water for treatment or disposal.
Special requirements:	See Section 13 for instructions for the disposal of waste/contaminated material.

Section 7: Handling and Storage

Subsection 1:	Handling
Handling practices	Wear appropriate PPE as detailed in Section 8.3. Keep out of reach of children.
Subsection 2:	Storage
Site requirements	Do not store near flame, sparks or hot surfaces. Do not store or transport near food or feed. Do not contaminate food or feed. Do not put into food or drink containers. Store in a cool, dry place, out of direct sunlight.
Packaging	Keep pesticide in original container.

Section 8: Exposure Controls/Personal Protection

Subsection 1:	Workplace Exposure Guidelines (may also be considered in section 2)
	No exposure standards are set at this time.
Subsection 2:	Engineering Controls
Exposure control measures	Use in a well ventilated area or with breathing protection.
Subsection 3:	Personal Protective Equipment (PPE)
Detail specifications for equipment	Use eye protection.
General hygiene	Always wash exposed skin after handling and before eating.

Section 9: Physical and Chemical Properties

Appearance	Yellow – brown powder	pH	4.1 10% slurry at 24degC
Odour	Faint organic/malt	Boiling point (degC)	Not available
Specific gravity (kg/L)	0.473	Freezing point (degC)	Not available
Solubility	Suspends readily in water	Flashpoint (degC)	Not flammable

Section 10: Stability and Reactivity

Stability of substance:	Stable under normal conditions.
Conditions to avoid:	High temperatures will damage spore viability.
Material to avoid:	Alkalinity inactivates product.
Hazardous decomposition products:	Unknown.
Hazardous polymerization:	Will not occur.

Section 11: Toxicological Information

Acute (Product Specific):

Eye irritation	Transient, mild to moderate irritation was observed in test animals in a study with this product. Rinsing the eyes with water dramatically reduced irritation scores. Classified as a non-irritant.
Oral LD50 (rat)	>5,050 mg/kg (rat). EPA Toxicity Category IV.
Dermal LD50 (rabbits)	>2,020 mg/kg (rabbit). EPA Toxicity Category III.
Inhalation toxicity	Due to the non-dusty characteristics of the product, the test facility was unable to generate a sufficiently high enough concentration of respirable particles. Animal test not warranted.
Irritation of the skin (rabbits)	Transient, slight or mild irritation noted in a dermal irritation study with this product. EPA Toxicity Category IV.
Sensitisation	In a study with this product, no skin sensitisation was observed.

Chronic/Carcinogenicity: No adverse effects known. None of the components are classified as carcinogens.

Teratology (Birth Defects) Information: No adverse effects known.

Reproduction Information: No adverse effects known.

See Section 2 for general hazard information.

Section 12: Ecological Information

Potential Environmental Interactions: Low Toxicity to fish and wildlife. Biobit® DF is toxic only to caterpillars of certain lepidopterous insects (moths and butterflies). It does not harm beneficial insects and mite predators, and leaves no harmful crop residues.

Section 13: Disposal Considerations

Product disposal:	Use as directed or inactivate with heat and bury.
Container disposal:	Puncture, or shred and bury empty containers in a local authority landfill.

Section 14: Transport Information

UN Number:	N/A
DG Class and Subsidiary Group:	N/A
Proper shipping name:	N/A
Packing group:	N/A
HAZCHEM code:	N/A
Special precautions:	Do not carry more than 3kg on a passenger service vehicle.

Section 15: Regulatory Information

Regulatory status:	Registered pursuant to the ACVM Act 1997, No. P7693. See www.foodsafety.govt.nz for registration conditions. Approved Pursuant to the HSNO Act 1996, Number HSR000698. See www.epa.govt.nz for approval conditions.
HSNO Controls:	Trigger quantities for this substance:
SDS must be available for	50kg
Signage	10,000kg
Emergency Plan	10,000kg

Section 16: Other Information

Revision due:	8 May 2017
Additional information:	Directions for use are found on the product label.

Glossary:	
ACVM	Agricultural Compounds and Veterinary Medicines (in relation to Group or Act 1997)
CAS	Chemical Abstract Services Number, used to uniquely identify chemical compounds
HSNO	Hazardous Substances and New Organisms (legislation 1996)
LD50	Lethal Dose fatal to 50% of test animals/organisms
PPE	Personal Protective Equipment

This SDS summarises our best knowledge of the health and safety hazard information available for this product and how to safely handle and use it. Since the use of this information and the conditions of the use of this product are not under the control of GroChem, it is the user's responsibility to determine conditions of safe use of the product.