

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH) and Commission Regulation (EU) No 453/2010

***Bacillus thuringiensis*, subsp. *israelensis* 200 GR**

Ref. Bti200GRbioCLP/EU/310gb

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier
VectoBac G, VectoBac GR (trade names)
Bacillus thuringiensis, subsp. *israelensis*, 200 ITU/mg granule
GIFAP code: GR
EC number: not applicable

1.2. Relevant identified uses of the substance or mixture and uses advised against

Biological insecticide (biocide use)
Not for public use

1.3. Details of the supplier of the safety data sheet

SUMITOMO CHEMICAL AGRO EUROPE S.A.S.
Parc d'Affaires de Crécy
10A, rue de la Voie Lactée
69370 Saint-Didier-au-Mont-d'Or
France
Tel.: +33 (0) 478 64 32 60
email: sds@sumitomo-chem.fr

Manufacturer of the product

VALENT BIOSCIENCES CORPORATION
870 Technology Way
Libertyville, Illinois 60048
USA
Tel.: +1 847 9684700

New Emergency Tel no 24/24hrs:
Europe +44 (0) 1235 239 670
Middle East & Africa +44 (0) 1235 239 671

1.4. Emergency Telephone number 24/24hrs

Europe +44 (0) 1235 239 670
Middle East & Africa +44 (0) 1235 239 671

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Not classified as hazardous according to regulation (EC) No 1272/2008 (CLP)

Signal word(s) none

Pictogram (s) none

Hazard statement(s) none

2.2. Label elements

Signal word(s) none

Pictogram (s) none

Hazard statement(s) none

Precautionary statement(s)
P261: Avoid breathing dust.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352: IF ON SKIN: Wash with plenty of water.
P363: Wash contaminated clothing before reuse.
P501: Dispose of contents/container in accordance with local regulation.
EUH 401: To avoid risks to human health and the environment, comply with the instructions for use.

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH) and Commission Regulation (EU) No 453/2010

***Bacillus thuringiensis*, subsp. *israelensis* 200 GR**

Ref. Bti200GRbioCLP/EU/310gb

2.3. Other hazards

Contains *Bacillus thuringiensis*, micro-organisms may have a potential to provoke sensitising reactions.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. This product is to be considered as a mixture in conformance to EU regulations.

Composition/Information on main ingredients

Number	ITU/mg	CAS number	Chemical name
1	200 (2.8%w/w)	NA	<i>Bacillus thuringiensis</i> , subsp. <i>israelensis</i> (Strain AM 65-52, Serotype H-14)

Number	EC number	Annex-1 listing	Regl 1272/2008 Pict.	Hazard statements
1	/	yes	none	none

Other information code ID: ABG-6138

4. FIRST AID MEASURES

4.1. Description of first aid measures

General	In all cases of doubt, seek medical attention.
Inhalation	Move to fresh air. If symptoms persist, seek medical advice.
Skin	Remove contaminated clothing. Wash skin immediately with water. Launder clothes before reuse.
Eye	Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.
Ingestion	Rinse mouth. Never induce vomiting in unconscious or confused persons. Seek medical attention.

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

Dust may be irritating to the respiratory tract and cause symptoms of bronchitis.
May cause an allergic skin reaction.

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

Symptomatic treatment is advised.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media	Dry chemical powder, carbon dioxide, foam or water.
Unsuitable extinguishing media	none known.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition during combustion may evolve toxic and irritant vapours.

5.3. Advice for fire-fighters

Wear self-contained breathing apparatus. Wear suitable protective clothing and eye/face protection.

Other information

Water used to extinguish a fire should not be allowed to enter the drainage system or watercourses.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment, and emergency procedures

For non-emergency personnel

Do not breathe dust. Avoid contact with skin.
Wear protective gloves, safety goggles or face shield, and suitable protective clothing.

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH) and Commission Regulation (EU) No 453/2010

***Bacillus thuringiensis*, subsp. *israelensis* 200 GR**

Ref. Bti200GRbioCLP/EU/310gb

Remove of ignition sources.
 Evacuate the danger area.

For emergency responders

Do not breathe dust. Avoid contact with skin.
 Wear protective gloves (nitrile), safety goggles or face shield, and suitable protective clothing.
 Remove of ignition sources.
 Evacuate the danger area or consult an expert.

6.2. Environmental precautions

Do not allow to escape into sewage system or water courses. Do not wash residues into drains or other waterways.

6.3. Methods and material for containment and cleaning up

Containment of a spill

Do not allow to escape into sewage system or water courses.

Clean-up procedures

Clean up spills immediately. Sweep up and place into sealable containers. Dig up heavily contaminated soil and place into drums. Use a damp cloth to clean floors and other objects, and also place in sealable container. Dispose of all waste and contaminated clothing in the same manner as waste chemicals (i.e. via an authorized disposal facility). Do not wash residues into drains or other waterways.

6.4. Reference to other sections

For personal protection see section 8.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

The usual precautions for handling chemicals should be observed. For personal protection see section 8.

Fire and explosion prevention

No specific recommendations.

7.2. Conditions for safe storage, including any incompatibilities

Storage requirements

Store in a dry and cool place. Keep container in a well-ventilated place. Keep away from food, drink and animal feeding stuffs. Do not drink, eat and smoke in work areas.

Other information

Do not mix with water (except for the normal preparation).

7.3. Specific end use(s)

see label on the container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

There is no national exposure limit for this product.
 No chemical safety report is required for this kind of product.

8.2. Exposure controls

Appropriate engineering controls

Provide adequate ventilation.

Individual protection measures

Respiratory

In case of dust formation, use dust mask.

Hand

Wear protective gloves of nitrile

Eye

Wear safety goggles or face shield.

Skin and body

Wear suitable protective clothing.

Other information

Launder clothes before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH) and Commission Regulation (EU) No 453/2010

***Bacillus thuringiensis*, subsp. *israelensis* 200 GR**

Ref. Bti200GRbioCLP/EU/310gb

Name	<i>Bacillus thuringiensis</i>, subsp. <i>israelensis</i>, 200 ITU/mg granule
Appearance	solid (granule) (Visual assessment)
Dust content	nearly dust free (0.05 mg dust/30 g product); attrition resistance: 99.7% (CIPAC MT178)
Colour	Ochre (Visual assessment)
Odour	characteristic odour of fermentation products (Olfactory assessment)
Odour threshold	not determined
pH value	5.4 (10% slurry in water)
Melting point/freezing point	not applicable
Initial boiling point & boiling range	not applicable
Flash point	not applicable
Evaporation rate	not applicable
Flammability	not flammable (based on the characteristics of the active substance and ingredients)
Upper/lower flammability or explosive limits	not determined
Vapour pressure	not applicable
Vapour density	not applicable
Relative density	0.48 g/ml
Bulk density	not applicable
Solubility in water	suspends and partially soluble in water
Solubility in other solvents	not applicable
Partition coefficient n-octanol/water	not applicable
Autoignition temperature	not determined (unlikely based on the characteristics of the active substance and ingredients)
Decomposition temperature	not determined
Dynamic viscosity	not applicable
Kinematic viscosity	not applicable
Explosive properties	not explosive (expert statement)
Oxidising properties	not determined
9.2. Other information	
Relative vapour density (air = 1)	not applicable
Surface tension	not applicable

10. STABILITY AND REACTIVITY

10.1. Reactivity	Stable under recommended storage and handling conditions (see also section 7).
10.2. Chemical stability	Stable under recommended storage and handling conditions (see section 7).
10.3. Possibility of hazardous reactions	None known
10.4. Conditions to avoid	Avoid high temperature, light, humidity. Alkalinity inactivates the product.
10.5. Incompatible materials	Oxidizers.
10.6. Hazardous decomposition products	Thermal decomposition during combustion may evolve toxic and irritant vapours. (See also section 5)

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

No experimental toxicological data are available on the preparation as such. The following data are applicable to a close formulation:

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH) and Commission Regulation (EU) No 453/2010

***Bacillus thuringiensis*, subsp. *israelensis* 200 GR**

Ref. Bti200GRbioCLP/EU/310gb

Name	<i>Bacillus thuringiensis</i>, subsp. <i>israelensis</i>, 3000 ITU/mg water dispersible granules (code ID: ABG6511)
Acute toxicity	
Oral	LD ₅₀ rat: >5000 mg/kg (OECD 401)
Dermal	LD ₅₀ rabbit: > 5000 mg/kg (OECD 402)
Inhalation	LC ₅₀ rat (4 hours): >0.014 mg/l (nose-only; maximum feasible concentration) (OECD 403)
Irritation	
Skin	mildly irritating (OECD 404)
Eye	weakly irritating (OECD 405)
Sensitization	not sensitizing (Maximisation test) (OECD 406)

Other toxicological information

The following data are applicable to the ingredient(s) listed below:

Name	Active substance, <i>Bacillus thuringiensis</i>, subsp. <i>israelensis</i> (Strain AM 65-52, Serotype H-14) technical grade
	Genotoxicity: No validated methods available for microorganisms.

Current available studies for skin sensitisation assessment are not appropriate for micro-organisms. Consequently products containing microbials are required to carry a precautionary phrase but are not classified R43/H317.

Therefore, based on the available data no classification criteria are met for any of the hazard classes.

Information on likely routes of exposure

The most probable routes of exposure are via skin or inhalation.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

No experimental ecotoxicological data are available on the preparation as such. The following data are applicable to a close formulation:

Name	<i>Bacillus thuringiensis</i>, subsp. <i>israelensis</i>, 3000 ITU/mg water dispersible granules (code ID: ABG6511)
Fish	Acute toxicity, 96-h LC ₅₀ (<i>Oncorhynchus mykiss</i>): > 1000 mg/l (OECD 203)
Bees	Acute toxicity, 48h-LD ₅₀ (<i>Apis mellifera</i>): oral >108.04 µg/bee (OECD 213) contact > 100 µg/bee (OECD 214)

The following data are applicable to the ingredient(s) listed below:

Name	Active substance, <i>Bacillus thuringiensis</i>, subsp. <i>israelensis</i> (Strain AM 65-52, Serotype H-14) technical grade
Fish	Acute toxicity, 96-h LC ₅₀ (<i>Oncorhynchus mykiss</i>): > 370 mg/l (EPA-660/3-75-009) (<i>Lepomis macrochirus</i>): > 600 mg/l (EPA-660/3-75-009)
Daphnia	Acute toxicity, 10d-LC ₅₀ (<i>Daphnia magna</i>): > 50 mg/l (OPPTS 885-4240) Chronic toxicity, 21-d (<i>Daphnia magna</i>): NOEC = 5 mg/l (OECD 211)
Bees	Acute oral toxicity, 14d-LD ₅₀ (<i>Apis mellifera</i>): >1737 µg/bee (> 10x the field rate) (US EPA 154A-24)
Birds	Acute toxicity, 5d-LC ₅₀ (Bobwhite quail): > 3077 mg/kg (FIFRA 154A-16) (Mallard duck): > 3077 mg/kg (FIFRA 154A-16)
Earthworm	Acute toxicity, 30d-LC ₅₀ (<i>Eisenia foetida</i>): > 1000 mg/kg dry soil. (OECD 207)
Soil micro organism	No bactericidal neither antibiotic activity has been detected.

12.2. Persistence and degradability

The following data are applicable to the ingredient(s) listed below:

Name	Active substance, <i>Bacillus thuringiensis</i>, subsp. <i>israelensis</i> (Strain AM 65-52, Serotype H-14) technical grade
Degradation Biotic	Not applicable.

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH) and Commission Regulation (EU) No 453/2010

***Bacillus thuringiensis, subsp. israelensis* 200 GR**

Ref. Bti200GRbioCLP/EU/310gb

Degradation Abiotic

Rapidly degraded in soil when exposed to light.

12.3. Bioaccumulative potential

The following data are applicable to the ingredient(s) listed below:

Name	Active substance, <i>Bacillus thuringiensis, subsp. israelensis</i> (Strain AM 65-52, Serotype H-14) technical grade
Bioaccumulation	Not applicable; the substance is not pathogenic to non-target organisms and has not been seen to reproduce in non-target organisms.

12.4. Mobility in soil

The following data are applicable to the ingredient(s) listed below:

Name	Active substance, <i>Bacillus thuringiensis, subsp. israelensis</i> (Strain AM 65-52, Serotype H-14) technical grade
	Adsorption K_{Foc} values: not applicable for microbial substances
	Desorption $K_{Foc-des}$ values: not applicable for microbial substances
	<i>Bacillus thuringiensis</i> is rapidly bound to clay particles and will be similarly non-mobile in soil

12.5. Results of PBT and vPvB assessment

not required (no chemical safety report required).

12.6. Other adverse effects

no other known adverse effects on the environment.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Substance and/or Mixture	According to local regulations. For further advice contact manufacturer.
Contaminated packaging	According to local regulations.

14. TRANSPORT INFORMATION

Land transport ADR/RID, Sea transport IMO/IMDG, Air transport ICAO-TI/IATA-DGR:

14.1. UN Number	None
14.2. UN proper shipping name	not relevant
14.3. Transport hazard class(es)	Land transport ADR/RID class: Not restricted IMO/IMDG code class: Not restricted Air transport ICAO-TI/IATA-DGR class: Not restricted
	label: Not relevant
14.4. Packing group	Not relevant
14.5. Environmental hazards	Marine pollutant: no
14.6. Special precautions for user	EMS: Not relevant no other special precaution required.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the ICB Code	not applicable

15. REGULATORY INFORMATION

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

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH) and Commission Regulation (EU) No 453/2010

***Bacillus thuringiensis, subsp. israelensis* 200 GR**

Ref. Bti200GRbioCLP/EU/310gb

There is no specific regulation/legislation for this mixture.

15.2. Chemical safety assessment

No chemical safety assessment is required for this mixture.

16. OTHER INFORMATION

Method for evaluating information referred to in Article 9 of Regulation (EC) No 1272/2008 used for the purpose of classification:

Classification based on the properties of the active substance and a close formulation.

Changes made to the previous version: sections nos 2, 3, 4, 11, were modified to remove any reference to directives 2001/59/EC or 1999/45/EC, add changes due to ATP4 and information about skin sensitisation assessment.

Full text of hazard statement(s) used in this document:

none

This information only concerns the above mentioned product for the specific use mentioned and is not valid for such product used in combination with any other product. The information is to our best knowledge correct and complete and is given in good faith as of the date indicated. It is the user's responsibility to use this information as appropriate for his own particular use of this product.