

SAFETY DATA SHEET

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

***Bacillus thuringiensis*, subsp. *israelensis* 123 g/l SC** Ref. Bti1200SCbioCLP/EU/400gb

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

1.1. Product identifier VectoBac 12AS, Skeetal 12AS (trade names)
Bacillus thuringiensis, subsp. *israelensis*, 123 g/l suspension concentrate
GIFAP code: SC (aqueous)
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
2, rue Claude Chappe
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, Suite 100
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

Classified as hazardous according to regulation (EC) No 1272/2008 (CLP)

Signal word(s) Warning

Pictogram (s)



Skin sens. Cat 1B

Hazard statement(s) H317: May cause an allergic skin reaction

Classified as hazardous according to:

- EU directive 67/548/EEC modified by Directive 2001/59/EC (results of the experimental studies),
- directives 1999/45/EC, 2001/60/EC, 2006/8/EC (classification based on the concentration of active substance and ingredients),

Date of revision:
Version number

27 December 2013
4.00

(Date of previous revision: 20 January 2013 ; version 3.00)
Page 1 of 7

SAFETY DATA SHEET

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

***Bacillus thuringiensis, subsp. israelensis* 123 g/l SC** Ref. Bti1200SCbioCLP/EU/400gb



Symbol(s) IRRITANT (Xi)
R(isk) phrase(s) R43: May cause sensitisation by skin contact.

2.2. Label elements

Classified as hazardous according to regulation (EC) No 1272/2008 (CLP)

Signal word(s) Warning

Pictogram (s)



Skin sens. Cat 1B

Hazard statement(s) H317: May cause an allergic skin reaction

Precautionary statement(s)
 P261: Avoid breathing spray.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P363: Wash contaminated clothing before reuse.
 P302 + P352: IF ON SKIN: Wash with plenty of soap and water
 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.

Special risks and safety precautions (directive 91/414/EEC):

General provisions none
Specific safety precautions SPo 2: Wash all protective clothing after use.

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 EC directives.

Composition/Information on main ingredients

Number	Amount	CAS number	Chemical name
1	123 g/l (1200 ITU/mg)	NA	<i>Bacillus thuringiensis, subsp. israelensis</i> (strain AM 65-52, serotype H-14)

Number	EC number	Annex-1 Listing	Regl 1272/2008 Pict.	Hazard statements	Symbol 2001/59/EC	R phrase(s)
1	/	yes	none	none	none	none

Other information code ID: ABG-6193

4. FIRST AID MEASURES

4.1. Description of first aid measures

Date of revision: 27 December 2013 (Date of previous revision: 20 January 2013 ; version 3.00)
 Version number 4.00 Page 2 of 7

SAFETY DATA SHEET

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

***Bacillus thuringiensis, subsp. israelensis* 123 g/l SC** Ref. Bti1200SCbioCLP/EU/400gb

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 immediately with soap and water.
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. Always seek medical attention.

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

May cause sensitisation by skin contact.

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, sand 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

Avoid contact with skin. Do not breathe spray mist.
Wear protective gloves, safety goggles or face shield, and suitable protective clothing.
Remove of ignition sources.
Evacuate the danger area.

For emergency responders

Avoid contact with skin. Do not breathe spray mist.
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

In case of spill (liquid), soak it up immediately with suitable absorbent, such as sawdust or granular absorbent clay. 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.

Date of revision:
Version number

27 December 2013
4.00

(Date of previous revision: 20 January 2013 ; version 3.00)
Page 3 of 7

SAFETY DATA SHEET

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

***Bacillus thuringiensis, subsp. israelensis* 123 g/l SC** Ref. Bti1200SCbioCLP/EU/400gb

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 feedingstuffs. 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 The usual precautions for handling chemicals should be observed.
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

Name	<i>Bacillus thuringiensis, subsp. israelensis, 123 g/l suspension concentrate</i>
Appearance	liquid (visual assessment)
Colour	light brown (visual assessment)
Odour	Malt-like odour (olfactory assessment)
Odour threshold	not determined
pH value	5 (1% w/v suspension, 20°C) (CIPAC MT 75.3)
Melting point/freezing point	not determined
Initial boiling point & boiling range	not determined
Flash point	not applicable (aqueous suspension)
Evaporation rate	not applicable
Flammability	not applicable (aqueous suspension)
Upper/lower flammability or explosive limits	not determined
Vapour pressure	not applicable
Vapour density	not applicable
Relative density	1.06 g/ml at 20°C (EEC A.3)
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; aqueous suspension)
Decomposition temperature	not determined

Date of revision: 27 December 2013
 Version number 4.00

(Date of previous revision: 20 January 2013 ; version 3.00)
 Page 4 of 7

SAFETY DATA SHEET

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

***Bacillus thuringiensis, subsp. israelensis* 123 g/l SC** Ref. Bti1200SCbioCLP/EU/400gb

Dynamic viscosity	< 500 cps (guideline not specified)
Kinematic viscosity	not determined
Explosive properties	not explosive (based on the characteristics of the active substance and ingredients)
Oxidising properties	not applicable

9.2. Other information

Relative vapour density (air = 1)	not determined
Surface tension	not determined

10. STABILITY AND REACTIVITY

10.1. Reactivity	Stable under recommended storage and handling conditions (see also section 7).
10.2. Chemical stability	Stable for a minimum of 2 years 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. May cause corrosion if left in prolonged contact with aluminium surfaces.
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

Name	<i>Bacillus thuringiensis, subsp. israelensis, 123 g/l suspension concentrate</i>
Infectivity/Pathogenicity	Rat oral: no cumulative toxicity by repeated oral administration at maximum recommended test dose level. NOEL: > 8.13 x 10 ⁸ spores/ml/rat
Acute toxicity	
Oral	LD ₅₀ rat: >5000 mg/kg (EPA FIFRA 81-1)
Dermal	LD ₅₀ rabbit: >5000 mg/kg (EPA FIFRA 81-2)
Inhalation	LC ₅₀ rat (4 hours): >5.34 mg/l (whole body) (EPA FIFRA 81-3)
Irritation	
Skin	moderately irritating (not irritant in the sense of 2001/59/EC) (FIFRA guideline 81-5)
Eye	mildly irritating (FIFRA guideline 81-4)

The following data are applicable to a close formulation:

Name	<i>Bacillus thuringiensis, subsp. israelensis, 600 ITU/mg suspension concentrate</i>
Sensitization	sensitizing (Modified Buehler test) (FIFRA 152-36)

Other toxicological information

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
	Genotoxicity: No validated methods available for microorganisms.

Based on the available data, the classification criteria are met for the sensitization hazard class.

Information on likely routes of exposure

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

Date of revision:	27 December 2013	(Date of previous revision: 20 January 2013 ; version 3.00)
Version number	4.00	Page 5 of 7

SAFETY DATA SHEET

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

Bacillus thuringiensis, subsp. israelensis 123 g/l SC Ref. Bti1200SCbioCLP/EU/400gb

12. ECOLOGICAL INFORMATION

12.1. Toxicity

No experimental ecological data are available on the preparation as such. 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 LC50 (<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-LC50 (<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-LD50 (<i>Apis mellifera</i>): >1737 µg/bee (> 10x the field rate) (US EPA 154A-24)
Birds	Acute toxicity, 5d-LC50 (Bobwhite quail): > 3077 mg/kg (FIFRA 154A-16) (Mallard duck): > 3077 mg/kg (FIFRA 154A-16)
Earthworm	Acute toxicity, 30d-LC ₅₀ : > 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.
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</i>, subsp. <i>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</i>, subsp. <i>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:

SAFETY DATA SHEET

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

***Bacillus thuringiensis, subsp. israelensis* 123 g/l SC** Ref. Bti1200SCbioCLP/EU/400gb

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 label: not relevant IMO/IMDG code class: not restricted Air transport ICAO-TI/IATA-DGR class: not restricted
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

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 tests, on a close formulation and on properties of the active substance.

Changes made to the previous version: section nos 2; 3, were modified to include/justify the CLP classification of the mixture.

Full text of risk phrase(s) used in this document:

R43: May cause sensitisation by skin contact

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

H317: May cause an allergic skin reaction

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.