

SAFETY DATA SHEET

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

DIPEL DF



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

1.1. Product identifier

DiPel DF

Bacillus thuringiensis subsp. kurstaki, 540 g/kg water dispersible granule
GIFAP code: WG
EC number: not applicable

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

Biological insecticide (agricultural use)
Not for public use

1.3. Details of the supplier of the safety data sheet

INTERFARM (UK) LIMITED
36 Newgate Street
Doddington
Cambridgeshire PE15 0SR
United Kingdom
Tel.: +44 (0)1354 741414
email: technical@interfarm.co.uk

Manufacturer of the product

VALENT BIOSCIENCES CORPORATION
870 Technology Way, Suite 100
Libertyville, Illinois 60048
USA
Tel.: +1 847 9684700

1.4. Emergency Telephone number 24/24hrs

UK & Ireland; +44 (0)844 560 5135

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

Not 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),
- Directive 2003/82/EC for pesticides (special risks and safety precautions).

Symbol(s) none

R(isk) phrase(s) none

2.2. Label elements

Signal word(s) none

Pictogram (s) none

Hazard statement(s) none

Precautionary statement(s)

P261: Avoid breathing spray.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352: IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER.
P363: Wash contaminated clothing before reuse

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P501 (UK): Dispose of contents/container to a licensed hazardous-waste contractor or collection site except for empty clean containers, which can be disposed of as non-hazardous waste.

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

SP 1: Do not contaminate water with the product or its container

Specific safety precautions

SPo 2: Wash all protective clothing after use.

2.3. Other hazards

Contains *Bacillus thuringiensis*. Micro-organisms may have the 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	g/kg	CAS number	Chemical name
1	540	NA	<i>Bacillus thuringiensis</i> subsp. <i>kurstaki</i> (Strain ABTS-351, serotype 3a3b)

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-6404

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 immediately with soap and 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. Always 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 have a potential to provoke sensitising reactions.

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 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

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For non-emergency personnel	Avoid contact with skin. Wear protective gloves, safety goggles or face shield, and suitable protective clothing. Remove ignition sources. Evacuate the danger area.
For emergency responders	Avoid contact with skin. Wear protective nitrile gloves, safety goggles or face shield, and suitable protective clothing. Remove ignition sources. Evacuate the danger area or consult an expert.
6.2. Environmental precautions	Do not allow escape into sewage system or watercourses. 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 escape into sewage system or watercourses.
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 away from sunlight. 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	In case of dust formation, use dust mask.
Hand	Wear protective nitrile gloves.
Eye	Wear safety goggles or face shield.
Skin and body	Wear suitable protective clothing.
Other information	Laundry clothes before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Name	<i>Bacillus thuringiensis subsp. kurstaki, 540 g/kg water dispersible granule</i>
Appearance	granule (Visual assessment)
Colour	light brown (Visual assessment)
Odour	musty, yeast like odour (Olfactory assessment)
Odour threshold	not determined
pH value	4.49 (1% in water, 25°C) (CIPAC MT 75.2)
Melting point/freezing point	not determined
Initial boiling point & boiling range	not applicable

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Flash point	not applicable
Evaporation rate	not applicable
Flammability	not "highly 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	not applicable
Bulk density	0.473 g/ml (23°C) (FIFRA 151A-16)
Solubility in water	suspends and partially soluble in water
Solubility in other solvents	not applicable
Partition coefficient n-octanol/water	not applicable
Autoignition temperature	252°C (EEC A.16)
Decomposition temperature	no decomposition up to the autoignition temperature
Dynamic viscosity	not applicable
Kinematic viscosity	not applicable
Explosive properties	not explosive (based on the characteristics of the active substance and ingredients)
Oxidising properties	not oxidising (based on the characteristics of the active substance and ingredients)
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
10.5. Incompatible materials	Oxidisers
10.6. Hazardous decomposition products	Thermal decomposition may evolve toxic and irritant vapours (see also section 5).

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Name	<i>Bacillus thuringiensis subsp. kurstaki, 540 g/kg water dispersible granule</i>
Acute toxicity	
Oral	LD ₅₀ rat: >5050 mg/kg (OECD 401)
Dermal	LD ₅₀ rabbit: >2020 mg/kg (OECD 402)
Inhalation	LC ₅₀ rat (4 hours): > 5.15 mg/l (nose only) (OECD 425)
Irritation	
Skin	slightly irritating (OECD 404)
Eye	moderately irritating (not irritant in the sense of 2001/59/EC) (OECD 405)
Sensitization	not sensitising (Buehler test) (OECD 406)

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

Information on likely routes of exposure

This product is for agricultural use, therefore the most probable routes of exposure are via skin or inhalation.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Name	<i>Bacillus thuringiensis subsp. kurstaki, 540 g/kg water dispersible granule</i>
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Algae	Acute toxicity, 72h- (<i>Pseudokirchneriella subcapitata</i>): EC ₅₀ = 50.84 mg/l (OECD 201) NOEC = 10 mg/l
Bees	Acute oral toxicity, 48h-LD ₅₀ (<i>Apis mellifera</i>): > 222.41 µg/bee (OECD 213) Acute contact toxicity, 48h-LD ₅₀ (<i>Apis mellifera</i>): > 185.0 µg/bee (OECD 214)

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

Name	Active substance, <i>Bacillus thuringiensis subsp. kurstaki</i> technical grade
Fish	Infectivity/pathogenicity, 32d-LC50 (<i>Oncorhynchus mykiss</i>): > 2.87 x 10 ⁹ cfu/l test media (>143.5 mg as/l) (FIFRA Guideline 154-19) Infectivity/pathogenicity, 32d-LC50 (<i>Lepomis macrochirus</i>): > 2.87 x 10 ⁹ cfu/l test media (>143.5 mg as/l) (FIFRA Guideline 154-19)
Daphnia	Toxicity, (<i>Daphnia magna</i>) 21d-EC50: (adult mortality / immobility): 14 mg/l NOEC < 5 mg/l (FIFRA 154-20)
Bees	Oral toxicity, 14d-LD50 (<i>Apis mellifera</i>): >4042 µg/bee (FIFRA 154A-24)
Birds	Toxicity, 5d-NOEC (Bobwhite quail): > 2857 mg/kg b.w./d (FIFRA 154A-16) (Mallard duck): > 2857 mg/kg b.w./d (FIFRA 154A-16)
Earthworm	Toxicity, 30days-LC ₅₀ (<i>Eisenia foetida</i>): > 1000 mg/kg soil (no effect). (OECD 207)

12.2. Persistence and degradability

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

Name	Active substance, <i>Bacillus thuringiensis subsp. kurstaki</i> technical grade
Degradation Biotic	Btk is naturally present in the environment ; leaching is unlikely to occur.
Degradation Abiotic	Btk shows a rapid loss of activity in response to UV light ; increasing humidity also contributes to this reduction. High values of pH (pH9) also decrease the insecticidal activity.

12.3. Bioaccumulative potential

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

Name	Active substance, <i>Bacillus thuringiensis subsp. kurstaki</i> 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. kurstaki</i> technical grade
	Adsorption K _{Foc} values: not applicable for microbial substances
	Desorption K _{Foc-des} values: not applicable for microbial substances

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
14.4. Packing group	Not relevant
	label: not relevant

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- 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 and properties of the active substance.

Changes made to the previous version: Sections 2, 3 & 16 were modified to introduce CLP hazard information and to declare hazardous ingredients according to CLP. Sections 12 & 16 were modified to include/justify the CLP classification of the mixture. Other sections were updated to meet the requirements of Regulation 453/2010. [Based on Btk32000WGCLP/EU/300gb from SCAE]

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

None

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

None

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.