DiPel® DF

BIOLOGICAL INSECTICIDE

DRY FLOWABLE

MAPP 18874

Water-dispersible granule formulation containing 54% w/w *Bacillus thuringiensis* subsp. *kurstaki* strain ABTS-351

DiPel® DF is a biological insecticide used for the control of caterpillars (Lepidopterous larvae) in vegetables, soft fruit, ornamentals and amenity vegetation.

SAFETY PRECAUTIONS

Contains *Bacillus thuringiensis* subsp. *kurstaki*.

Micro-organisms may have the potential to provoke sensitising reactions.

Operator protection

Avoid contact with eyes.

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND SUITABLE RESPIRATORY PROTECTIVE EQUIPMENT* when handling the product or applying the product.

* Disposable filtering facepiece respirator to at least EN149 FFP3 or equivalent.

However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.

Avoid breathing spray.

IF ON SKIN: Wash with plenty of water.

Wash all protective clothing after use.

Wash contaminated clothing before reuse.

WHEN USING, DO NOT EAT, DRINK OR SMOKE.

WASH HANDS before eating and after work.

DO NOT BREATHE DUST.

Environmental protection

Do not contaminate water with the product or its container.

Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads.

Storage and Disposal

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

KEEP OUT OF REACH OF CHILDREN.

KEEP AWAY FROM CHILDREN AND PETS.

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

EMPTY CONTAINER COMPLETELY and dispose of safely.

To avoid risks to human health and the environment, comply with the instructions for use.

The Control of Substances Hazardous to Health (COSHH) Regulations may apply to the use of this product at work.

VALENT BIOSCIENCES®
Valent BioSciences LLC
1910 Innovation Way, Suite 100
Libertyville, IL 60048 U.S.A.
1-800-323-9597

Authorisation holder:
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

SUMITOMO CHEMICAL (U.K.) PLC

Marketing Company:
Sumitomo Chemical (UK) plc
Hythe House,
200 Shepherds Bush Road,
London W6 7NL, UK
Tel: +44 (0)203 538 1539

For 24 hour emergency information ONLY: call +44 (0)1235 239 670

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0.5 Kg e

IMPORTANT INFORMATION
FOR USE ONLY AS A PROFESSIONAL INSECTICIDE

Crop	Maximum individual dose (product)	Maximum number of treatments	Latest time of application (pre-harvest interval)
Outdoor crops of: globe artichokes, broccoli/calabrese, Brussels sprouts, cabbages, cauliflowers, leeks, combining peas, edible podded peas	1.0 kg/ha	8 per year	1 day
Protected crops of: aubergines, broad beans-fresh, dwarf French beans, runner beans, cucumbers, peppers and chilli, tomatoes	1.0 kg/ha	8 per year	1 day
Strawberries, raspberries	0.75 kg/ha	8 per year	1 day
Ornamental plant production (outdoor and protected) and amenity vegetation	0.75 kg/ha	8 per year	1 day

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the product label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

DiPel DF is formulated as a water dispersible granule of a naturally occurring micro-organism.

Product Benefits:

- **DiPel DF** is biodegradable and leaves no detrimental residue on the crop when applied according to the use recommendations.
- **DiPel DF** acts on the target larvae after ingestion of the treated plant vegetation.

Following the start of deterioration of the gut walls, the larvae stop feeding and die 24 to 72 hours later.

- The efficacy of **DiPel DF** on young larvae (caterpillars) of Lepidopterous insects is similar to that of conventional insecticides when used according to the recommendations.
- **DiPel DF** has no known impact on the development of populations of natural predators and beneficial insects in integrated pest management programmes.

Pests Controlled:

DiPel DF is for the control of caterpillars (Lepidopterous larvae) and reduces crop damage caused by caterpillar feeding. Some control of *Mamestra brassicae* will be achieved.

Resistance Management

To avoid the development of resistance, **DiPel DF** should be used as part of an integrated programme, alternating with other chemical and non-chemical control methods. **DiPel DF** should be applied between 1 and 3 applications per generation.

Rates of Use

Apply **DiPel DF** between 1 and 3 times per caterpillar generation at the recommended dose. Use the higher dose or concentration when the pest pressure is high or larval populations are mixed with older larvae instars, especially for difficult to control pest species such as *Mamestra brassicae* (cabbage moth).

Crops	Dosage Rates
Outdoor globe artichokes, broccoli/calabrese, Brussels sprouts, cabbages, cauliflowers, leeks**, peas**	0.5 - 1.0 kg/ha*
Protected aubergines, beans**, cucumbers, peppers and chilli, tomatoes	0.75 - 1.0 kg/ha
Strawberries, raspberries	0.075 kg/hL
Outdoor and protected ornamentals, amenity vegetation	0.75 kg/ha

* Use lower rate against normal infestations of young larvae, but where population levels are high or where late instar larvae are present the higher rate is required for fully effective control.

** Qualified recommendation based on limited effectiveness and crop safety data.

Application Timing:

Apply as soon as the first larvae are seen, preferably during an active feeding period, and repeat the application at intervals of 7 to 10 days until the end of the hatching period. If heavy rain falls shortly after application, before the larvae have the opportunity to ingest the product, repeat the application. For optimum results it is best to apply the product avoiding conditions of high light intensity or temperatures outside the general range of 10 and 20°C. Spray the mixture on dry vegetation and do not apply if rain is expected within 12 hours of treatment.

Application Volume

The spray particles must be as fine and homogeneous as possible and sufficient volume of water should be used to ensure complete cover of the vegetation, but not to the point of run-off. The following spray volumes are given as a guide to application with higher volume applying to denser crop foliage, or larger trees and plants.

Crops	Volume Water/ha
Shrubs and trees	1000 - 1500 litres
Field crops, amenity vegetation	400 - 1000 litres
Protected crops	400 - 1000 litres

Mixing Instructions:

Fill spray tank half-full with water. Start agitator and slowly sprinkle the correct amount of DiPel DF into the centre of the agitator vortex. Run the agitator for a few minutes and bring up the water volume to the required spray volume. Agitate as necessary to maintain the suspension.

On emptying the container, rinse thoroughly three times. Add washings to the spray tank while filling. Wash out sprayer thoroughly after use. Dispose of container safely.

Maximum Number of Applications: Eight per crop.

CONDITIONS OF SUPPLY

All goods supplied by us are of high grade and we believe them to be suitable but, as we cannot exercise control over their mixing or use, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded and no responsibility will be accepted by us for any damage or injury whatsoever arising from their storage, handling, application or use.

Protect from frost

Batch Number:

Date of Manufacture:

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