

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY:**Product name:** DiPel® DF

A Biological insecticide used for the control of caterpillars (Lepidopterous larvae) in vegetables, soft fruit, ornamentals and amenity horticulture.

UK Marketing Company: Interfarm UK Ltd, 36, Newgate Street, Doddington, Cambs. PE15 0SR. UK. Tel +(0)1354 741414. Fax +(0)1534 741414	Manufacturer : Valent Biosciences Corporation 870 Technology Way Suite 100 Libertyville Illinois 60048, USA Emergency No 001 651 632 6184	Approval Holder : Valent Biosciences., A division of Sumitomo Chemical Agro Europe SA Parc D'Affaires de Crecy, 2 rue Claude Chappe, FR-69370 St.Didier au Mont d'Or. France
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2. COMPOSITION/INFORMATION ON INGREDIENTS:

Ingredients:

Substance	Concentration range	Cas. No.	Symbol	Phrases
<i>Bacillus thuringiensis</i> var. <i>kurstaki</i> (fermentation solids and solubles)	54% (32000 IU/mg)	68038-71-1	Nil	Nil

3. HAZARD IDENTIFICATION:

Not classified as hazardous according to EU directive 1999/45/EEC and 2001/60/EEC

4. FIRST AID:**Symptoms and effects:** The products may cause irritation or sensitisation. No other typical symptoms and effects are known.**Eyes:** Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic / supportive care as necessary.**Skin:** Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic / supportive care as necessary.**Ingestion:** Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic / supportive care as necessary.**Inhalation:** Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic / supportive care as necessary.**Advice to physician:** No specific recommendations**5. FIRE - FIGHTING MEASURES:**

The product is not considered flammable.

Suitable Extinguishing Media: Use appropriate medium for the underlying cause of the fire.**Special Procedures:** Not applicable.**Combustion Products or Thermal Decomposition Products:** Not determined.**Special Fire Fighting Equipment:** Wear protective clothing and self-contained breathing apparatus.**6. ACCIDENTAL RELEASE MEASURES:****Personal Precautions:** Do not breathe dust.**Personal Protection:** Coverall with hood, face or eye protection and air purifying respirator with high efficiency particulate filter (P3). Impervious gloves and boots.**Clean-up Procedures:** Recover product. Place in suitable container for disposal. Ventilate and wash the spill area.**7. HANDLING AND STORAGE:** Refer also to the code of practice on Safe use of Pesticides on Farms and Holdings. Read the label before use.**WEAR SUITABLE PROTECTIVE FACE PROTECTION (FACE SHIELD) AND SUITABLE PROTECTIVE GLOVES** when handling the concentrate.**WHEN USING DO NOT EAT DRINK OR SMOKE.****WASH HANDS** before eating and after work.**DO NOT CONTAMINATE SURFACE WATERS OR DITCHES** with chemical or used container.**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.**Storage:** Store in a dry place out of sunlight.

8. EXPOSURE CONTROL/PERSONAL PROTECTION:

When using the product refer to the label for full details.

Engineering Measures: Provide adequate ventilation.

Exposure limits: No exposure limits have been established for this material.

Personal Protective Equipment:

Respiratory: Particulate respirator (P3) for example EN149 (2001) FFP3, (where or if required).

Hand/Skin: Impervious Gloves. Approved Coveralls with Hood to CEN Type 5

Eyes: Faceshield, or goggles or full face respiratory protection.

From Product Label:

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment: **WEAR SUITABLE PROTECTIVE FACE PROTECTION**

(FACESHIELD) AND SUITABLE PROTECTIVE GLOVES when handling the concentrate. However engineering controls may replace personal protective equipment if a COSHH assessment shows they provide a higher standard of protection.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: Solid granules

Colour: Yellowish brown

pH (concentrate): 4.5 (10% aqueous solution) at 23°C

Solubility: Dispersible in water

Oxidising Properties: Not applicable

Flammability: Not considered flammable

Specific Gravity: 0.45-0.50 g/ml (bulk density)

Odour: Light fermentation odour

Melting Point: Not applicable

Boiling Point: Not applicable

Flash Point: Not applicable

Explosive Properties: Not applicable

Vapour Pressure: Not applicable

10. STABILITY AND REACTIVITY:

Stability: Stable under normal conditions of storage and use.

Hazardous Reactions: Not applicable.

Conditions/materials to avoid: Alkalinity will inactivate the product. Elevated storage temperatures >30°C.

Decomposition Products: Not determined.

11. TOXICOLOGICAL INFORMATION:

Acute Toxicity: DiPel® DF

LD50 (Oral Rat) > 5,050 mg/kg. LD50 (Dermal Rabbit) > 2,020 mg/kg

LC50 (Inhalation Rat) Not determined since the maximum attainable concentration of respirable particle in aerosol is extremely low.

Skin: Dermal Irritancy: Non-irritant

Eyes: Ocular Irritation: Non-irritant

Skin: Dermal Sensitisation: Non-sensitising (Buehler test)

Special target organ effects: *Bacillus thuringiensis* subsp. *kurstaki*

For a formulation of the active ingredient in toxicity studies with rats and sheep, no significant treatment-related effects were observed.

In a 4-week inhalation study in guinea pigs, animals receiving 0.2mg/l exhibited evidence of inflammation and reduced adrenal weights; two of twenty animals died (NOEL = 0.02mg/l or 20mg/m³).

One major component has been reported to produce lung fibrosis in experimental animals and exposed workers. A minor component has been reported to produce fetotoxicity and musculoskeletal abnormalities in reproductive studies in animals.

Carcinogenicity Information: Not determined. Not listed by: The National Toxicology Programme (USA), The International Agency for Research on Cancer (Branch of the World Health Organisation), The Occupational Safety and Health Administration (USA), and the American Conference of Governmental Industrial Hygienists.

12. ECOLOGICAL INFORMATION:

Persistence and Degradability: Btk shows a rapid loss of activity in response to UV light.

Bioaccumulative Potential: The product is not pathogenic and as such does not reproduce in living organisms other than target lepidopteran larvae.

Ecotoxicology: Low toxicity and non-pathogenic to tested aquatic species (fish, daphnia, algae), birds, bees and non-target arthropods.

13. DISPOSAL CONSIDERATIONS:

Dispose of product and containers by following the guidance in the Code of Practice for the Safe Use of Pesticides on Farms and Holdings.

14. TRANSPORT INFORMATION:

Road / ADR: Not regulated

Air IATA: Not Regulated

Sea IMDG: Not regulated.

15. REGULATORY INFORMATION:

Read all precautions before use.

For use only as an Agricultural and Horticultural Insecticide.

Registered as a pesticide MAPP No 14119.

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

Label Name: DiPel® DF. **Hazard symbols:** None. **Risk Phrases:** None

Safety Phrases:

S2: Keep out of reach of children

S13: Keep away from food, drink and animal feeding stuffs.

S20/21: When using do not eat, drink or smoke.

S25: Avoid contact with eyes.

This data sheet does not constitute an assessment of work place control required by current legislation.

16. OTHER INFORMATION:**Glossary:**

CAS. No. Number assigned to the substance by the Chemicals Abstract Service.

IU: Infective Units / International Units.

(from the label hl is a hectolitre which is 100 litres).

The data in this sheet is based on manufacturer's data sheet (DiPel® DF 06/11/01)

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The information in this sheet is not a specification, it does not guarantee specific properties.

The information is intended to provide general guidance as to health and safety based upon knowledge of the handling, storage and use of the product. No liability is accepted for any insufficiency or omission in any case whatsoever.

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