

## MATERIAL SAFETY DATA SHEET

**STATEMENT OF HAZARDOUS NATURE:**  
Hazardous according to the criteria of NOHSC

**COMPANY DETAILS:**

Syngenta Crop Protection Pty Limited  
ABN 33 002 933 717  
140-150 Bungaree Rd.,  
PENDLE HILL, NSW, 2145

Telephone No.: (02) 9688 0444  
24 Hours Emergency No.: 1 800 033 111

### IDENTIFICATION

**PRODUCT NAME: DELFIN<sup>®</sup> WG Biological Insecticide**

<b>Formulation type:</b>	water dispersible granule	<b>Dangerous Goods Class/</b>	
<b>Active Ingredient:</b>	<i>Bacillus thuringiensis</i> var. Kurstaki	<b>And Subsidiary Risk (ADG):</b>	none allocated
<b>Product Code No.:</b>	SAN 415 I WG 391	<b>Hazchem Code:</b>	none allocated
<b>Chemical type:</b>	Biological	<b>Packing Group:</b>	none allocated
<b>UN Number:</b>	none allocated	<b>Poisons Schedule:</b>	exempt

**USE:** A water dispersible granule for the control of a range of caterpillars in vegetables, tomatoes, vines, fruit trees, kiwifruit, tobacco and ornamentals as per the Directions for Use Table.

**PHYSICAL DESCRIPTION/PROPERTIES**

<b>Appearance:</b>	Brown granules	<b>Flash Point:</b>	Not applicable
<b>Odour:</b>	Slight fish odour	<b>Flammability:</b>	Non-flammable
<b>Vapour pressure:</b>	Not applicable	<b>Combustibility:</b>	Combustible
<b>Bulk Density (tap):</b>	0.52 g/cm <sup>3</sup>	<b>Behaviour in water:</b>	Dispersible

**OTHER PROPERTIES**

<b>pH:</b>	6.4 (at 23°C)	<b>Stability:</b>	Damaged by UV light
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**INGREDIENTS -**

	<b>CAS No.</b>	<b>Content (% w/w)</b>
<i>Bacillus thuringiensis</i> var. Kurstaki technical grade	Not applicable	85
Polysiloxane	125997-17-3 27252-83-1	<10
other ingredients determined not to be hazardous		10-<30

### HEALTH HAZARD INFORMATION

**HEALTH EFFECTS**

**ACUTE**

**Toxicity** - This product is slightly hazardous (WHO Hazard Class III)

<b>Swallowed:</b>	<b>LOW TOXICITY</b> Tests on rats indicate a low toxicity following single a dose of a similar formulation of undiluted product. (LD <sub>50</sub> > 5000 mg/kg)
<b>Dermal absorption:</b>	<b>LOW TOXICITY</b> Tests on rats indicate a low toxicity due to skin contact with a similar formulation of undiluted product. (LD <sub>50</sub> > 2000 mg/kg)
<b>Inhaled:</b>	<b>LOW TOXICITY</b> Based on limited studies with a similar technical concentrate.

**Irritation** (Based on studies with rabbits)  
Eye: **SLIGHT IRRITANT**  
Skin: **SLIGHT IRRITANT**

**Skin Sensitisation** - (Based on results of a similar WG formulation on guinea pigs) -  
**POSSIBLE SENSITISER**

**CHRONIC** (Active Ingredient)

The biological active ingredient *Bacillus thuringiensis* is essentially non-toxic to all but specific insect pests. It has not displayed any significant toxic effects in animal testing or in actual use.

**FIRST AID**

**In case of poisoning by any exposure route contact a doctor or Poisons Information Centre. Phone 131 126.**

Swallowed: Contact a doctor or Poisons Information Centre.  
Eye: Will irritate the eyes. Avoid contact with eyes. If product gets in eyes wash it out immediately with water.  
Skin: Will irritate the skin. Avoid contact with skin. If skin contact occurs remove contaminated clothing and wash affected areas thoroughly with soap and water.  
Inhaled: Move person to fresh air and keep at rest until recovered. Apply artificial respiration if necessary.

**ADVICE TO DOCTOR**

No specific antidote is available. If poisoning is suspected apply symptomatic therapy.

## PRECAUTIONS FOR USE

**ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS**

**EXPOSURE STANDARDS**

No exposure standards have been set for the components of this product.

**Exposure Potential** - Swallowing is unlikely under normal conditions of usage. Skin uptake can occur. Inhalation of the spray mist is a possible route of exposure. This product is mixed with water prior to use as spray. This diluted form is less toxic by all exposure routes.

**Re-entry Period** - Do not enter treated areas without protective clothing until the spray has dried.

**ENGINEERING CONTROLS**

No special requirements. Product is used outdoors.

**PERSONAL PROTECTION**

Will irritate the eyes and skin. Avoid contact with eyes and skin and open wounds. Do not inhale spray mist. When preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist and washable hat, elbow-length PVC gloves and face shield or goggles. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield and contaminated clothing.

**FLAMMABILITY**

This product is NON-FLAMMABLE and non-explosive.

## SAFE HANDLING INFORMATION

**STORAGE AND TRANSPORT**

Store in tightly sealed original containers in a dry secure place away from fertilisers, seed, feed and food. Store out of direct sunlight. Keep out of reach of children, unauthorised persons and animals. As this product is a biological insecticide, it can be damaged by heat and so should be protected at all times from high temperatures.

## SPILLS AND DISPOSAL

In case of spillage it is important to take all steps necessary to:

- Avoid eye and skin contact.
- Avoid contamination of waterways.

### **Procedure for spill:**

- (1) Keep all bystanders away.
- (2) Wear full length clothing and PVC gloves.
- (3) Re-position any leaking containers so as to minimise further leakage.
- (4) **For a product spill:** Sweep granule concentrate into a pile.  
**For a prepared spray spill:** Dam and absorb spill with an absorbent material (e.g. sand or soil).
- (5) Shovel the absorbed material or granule concentrate into drums.
- (6) Disposal of the absorbed material will depend upon the extent of the spill.
  - For quantities up to 50kg of product bury in a secure landfill site.
  - For quantities greater than 50kg seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established.
- (7) Decontaminate the spill area with detergent and water and rinse with water.

### **Dispose of empty, used containers by:**

- (a) Single rinse before disposal. Add rinsings to the spray tank.
- (b) DO NOT dispose of undiluted chemicals on-site.
- (c) Puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose, clear of waterways, vegetation and roots. Empty containers and product should not be burnt.

## FIRE/EXPLOSION HAZARD

This product is non-flammable and non-explosive. Explosive limits : greater than 1000 gm/m<sup>3</sup>. Extinguish warehouse and factory fires using fine-water spray or foam. During a fire this product may release smoke and hazardous decomposition products. When fighting a major fire wear an air-supplied respirator.

## OTHER INFORMATION

*Bacillus thuringiensis* var. *Kurstaki* (technical grade) is a microbial insecticide which degrades efficiently. It is practically non-toxic to birds, fish and crustaceans.

**Note:** This product is a registered agricultural chemical and must therefore be used in accordance with the container label directions. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the Federal health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

<b>CONTACT POINT:</b> Regulatory Affairs Manager - Crop Protection - (02) 9688 0444 <b>24 HOURS EMERGENCY CONTACT:</b> 1 800 033 111
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This Material Safety Data Sheet summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

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