

MATERIAL SAFETY DATA SHEET

STATEMENT OF HAZARDOUS NATURE:

Hazardous according to the criteria of Worksafe Australia

COMPANY DETAILS:

Novartis Crop Protection Australasia Limited
A.C.N. 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: CoSTAR[®] OF Biological Insecticide

Formulation type:	suspension concentrate	Dangerous Goods Class/	
Active Ingredient:	<i>Bacillus thuringiensis</i> <i>var kurstaki</i>	and Subsidiary Risk:	none allocated
Product Code No.:	SAN 420 I OF	Hazchem Code:	none allocated
Chemical type:	biological	Packaging Group:	none allocated
UN Number:	none allocated	Poisons Schedule:	exempt

USE: An oil flowable suspension concentrate formulation for the control of Bollworm (*Helicoverpa armigera*) and Native Budworm (*Helicoverpa punctigera*) on Cotton.

PHYSICAL DESCRIPTION/PROPERTIES

Appearance:	Brown, opaque liquid	Flash Point:	>182°C
Odour:	Fishy odour	Flammability:	Non-flammable
Vapour pressure:	Not available	Combustibility:	C2 Combustible
Specific gravity (H ₂ O=1)	0.97	Behaviour in water:	Disperses in water

OTHER PROPERTIES

Viscosity:	150-200 mPa.S (at 20°C)	Corrosiveness:	Not available
		pH:	4.5 - 6.5

INGREDIENTS -

	CAS No.	Content (% w/v)
Bacillus thuringiensis var. Kurstaki technical concentrate		10 - 30
organic phosphate esters		<10
other ingredients determined not to be hazardous		to 100

HEALTH HAZARD INFORMATION

HEALTH EFFECTS

ACUTE

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

Swallowed:	LOW TOXICITY Tests on rats using a similar formulation indicate a low toxicity following single doses of the undiluted product. (LD ₅₀ >5000 mg/kg)
Dermal absorption:	LOW TOXICITY Tests on rats using a similar formulation indicate a low toxicity due to skin contact with the undiluted product. (LD ₅₀ >3200 mg/kg)
Inhaled:	LOW TOXICITY Based on limited studies with a similar technical concentrate.

Irritation

Eye: **SLIGHT IRRITANT** (based on studies with rabbits)
Skin: **SLIGHT IRRITANT** (based on studies with guinea pigs)

Sensitisation - (based on results of the technical concentrate on guinea pigs) -

Skin: **NON-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.

Swallowed: If swallowed **DO NOT** induce vomiting. Give a glass of water and 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 24 hours after spraying.

ENGINEERING CONTROLS

No special requirements. Product is used outdoors.

PERSONAL PROTECTION

Will irritate the eyes and skin. Avoid contact with eyes, skin and open wounds. Do not inhale spray mist. When preparing the spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves and face shield or goggles. If product on skin, immediately wash area with soap and 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 or goggles 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.

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) Dam and absorb spill with an absorbent material (e.g. sand or soil).
- (5) Shovel the absorbed spill into drums.
- (6) Disposal of the absorbed material will depend upon the extent of the spill.
 - For quantities up to 50L of product bury in a secure landfill site.
 - For quantities greater than 50L 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 the smallest volume of water practicable.

Dispose of empty, used containers by:

- (a) Triple rinsing or preferably pressure rinsing containers with water. Add the rinsings to the spray tank. DO NOT dispose of undiluted chemicals on site.
- (b) If recycling, replace cap and return clean containers to recycler or designated collection point.
- (c) If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

FIRE/EXPLOSION HAZARD

This product is non-flammable and non-explosive. 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.

CONTACT POINT: Regulatory Affairs Manager - Crop Protection - (02) 9688 0444 24 HOURS EMERGENCY CONTACT: 1 800 033 111

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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Acknowledgments:

Collated by HerbiGuide. Phone 08 98444064 for more information.