

Section 1 Identification of the mixture and of the Company	
1.1	Product identifier
	Product Name Helicovex® Synonyms Bolldex, Verpavex
1.2	Relevant identified uses of the mixture and uses advised against
	Use of the product Biological Insecticide Uses advised against N/A
1.3	Details of the supplier of the Safety Data Sheet
	Supplier Andermatt Canada Inc. Address 1350 Regent Street Fredericton, New Brunswick Canada E3C 2G6 Phone +1 (506) 444-5690 E-mail info@andermattcanada.ca
1.4	Emergency Telephone Number
	Phone (medical) 1-888-226-8832
Section 2 Hazards Identification	
2.1	Classification of the mixture
	Not Classified; No hazardous components
2.2	Label elements
	IN THE CASE OF EYE CONTACT: Rinse cautiously with water for several minutes. Removing existing contact lenses if possible. Continue rinsing. Keep out of the reach of children. Store locked up. To avoid risks to human health and the environment, comply with the instructions for use. Contains <i>Helicoverpa armigera</i> nucleopolyhedrovirus. May produce an allergic reaction. Potential Sensitizer CAUTION – Eye irritant
2.3	Other hazards
	This mixture does not contain any substances, which are persistent, bioaccumulative and toxic (PBT). This mixture does not contain any substance which are very persistent, and bioaccumulative (vPvB).
Section 3 Composition/Information on Ingredients	
3.1	Substances
	This product is a mixture
3.2	Mixtures
	<i>Helicoverpa armigera</i> nucleopolyhedrovirus No hazardous component.
Section 4 First Aid Measures	
4.1	Description of first aid measures

General Notes	Change any contaminated or wetted clothing at once. If poisoning occurs contact a doctor.
Following Inhalation	Only possible by exposure to HOT product. Move to fresh air, rest, half upright position, loosen clothing. Oxygen or artificial respiration if there is difficulty in breathing. Seek medical advice after significant exposure. Treat symptomatically is advised.
Following skin contact	Remove contaminated clothing. Seek medical advice if irritation develops. Wash clothes before reuse. After contact with skin, wash immediately with plenty of water.
Following eye contact	Rinse thoroughly with plenty of water for several minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing.
Following ingestion	No typical symptoms and affects known
Advice to physician	Treat symptomatically
4.2 Most important symptoms and effect, both acute and delayed	No typical symptoms and effects known.
4.3 Indication of any immediate medical attention and special treatment needed.	None.

Section 5 Firefighting measures

5.1 Extinguishing media	
Suitable extinguishing media	Water mist, alcohol resistant foam, carbon dioxide, dry powder
Unsuitable extinguishing media	Water-jet, foam
5.2 Special hazards arising from the mixture	Vapors cause coughing At elevated temperatures (>200°C), there is a risk of exothermic polymerization. At temperatures, >280°C, acrolein may be formed.
5.3 Advice for firefighters	Avoid contact with oxidizing agents. Cool closed containers with water.

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures	Use protective clothing. Do not inhale.
6.2 Environmental precautions	Prevent entry into drains, waters, sewages, etc. of the product; contact immediately the municipal technical management if the product enters such bodies.
6.3 Methods and material for containment and cleaning up	Use absorbent material to collect spillage (eg. Sawdust, peat, chemical Binder). Place contaminated absorbent in closable containers. Use a damp cloth to clean floors and other objects after removal of contaminated absorbent. Also place used cleaning materials into closable receptacles.
6.4 Reference to other sections	See personal protective equipment under Section 8 of SDS.

Section 7 Handling and Storage

7.1 Precautions for safe handling

The usual precautions for handling chemicals should be observed.

7.2 Conditions for safe storage, including any incompatibilities

Store in original package only. Store in refrigerator (<5°C) for two years. Store at -18°C for years without any loss of activity.

7.3 Specific end use(s)

Biological Insecticide.

Section 8 Exposure controls/personal protection

8.1 Control parameter

The usual precautionary measures for handling chemicals should be observed.

8.2 Exposure controls

Eye/Face Protection

Use goggles

Skin Protection

Use Protective Clothing

Respirator Protection

A NIOSH approved mist filtering mask or respirator with any N-95, P-95 or R-95 filter.

Thermal Hazards

No specific recommendations

Other information

None

Section 9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical State

Liquid (20°C)

Color

Grey-brown

Odor

Characteristic

Odor Threshold

Not determined

pH

6-7

Melting point/freezing point

Not determine (not freezing at -18°C)

Initial boiling point and boiling range

105-290°C

Flash Point

Not determined up to 101°C

Evaporation Rate

Not determined

Flammability

Not flammable

Upper/Lower flammability or explosive limits

Not flammable

Vapor Pressure

Not determined

Vapor Density

Not relevant

Relative Density

1.16 g/mL

Solubility(ies)

Soluble in water

Partition coefficient: n-cotanol/water

Not determined

Auto-ignition temperature

Not determined

Decomposition temperature

>200°C

Viscosity

690 mPa x s (at 50 RPM, 20°C)

Explosive Properties

Non explosive

Oxidising properties

Not oxidizing

9.2 Other Information

None

Section 10 Stability and Reactivity

10.1 Reactivity

Not reactive

10.2 Chemical stability

No decomposition if stored and handled properly

10.3 Possibility of hazardous reactions

None relevant

10.4 Conditions to avoid

Temperature >200°C (polymerization, decomposition)

10.5 Incompatible materials

Avoid contact with oxidizing agents

10.6 Hazardous decomposition products

Acrolein (>280°C)

Section 11 Toxicological Information

11.1 Information of toxicological effects

Acute toxicity	Rat, oral, 5x10 ⁹ granules/kg BW (AcNPV), no adverse effects
Skin corrosion/irritation	Rabbit, contact, 0.5mL/animal (2.2x10 ¹³ granula of CpGV/L) for 4 hours, no adverse effect
Serious eye damage/irritation	Rabbit, contact, 0.1mL/eye (2.2x10 ¹³ granula of CpGV/L) for 24 hours, non-irritating
Respiratory or skin sensitization	Guinea pig, inhalation, 35 mg CpGV (7x10 ⁸ granules) per m ³ for 15 mins, no adverse effects
Germ cell mutagenicity	Not determined
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	Not existing
STOT-repeated exposure	Not existing
Aspiration hazard	Not relevant

Section 12 Ecological Information

12.1 Toxicity

Acute (short-term) toxicity

Fish	<i>Oncorhynchus mykiss</i> , 96 hours LC ₅₀ > 100mg/L = 2.0x10 ⁹ CpGV/L
Crustacea	<i>Daphnia magna</i> , 48 hours LC ₅₀ > 100mg/L = 2.0x10 ⁹ CpGV/L
Algae/aquatic plants	<i>Scenedesmus subspicatus</i> , 72 hours EC ₅₀ > 100mg/L = 2.0x10 ⁹ CpGV/L
Other organisms	<i>Lemna gibba</i> , 7 day EC ₅₀ > 100mg/L = 3.1x10 ⁹ CpGV/L

Chronic (long-term) toxicity

Fish	No data available
Crustacea	No data available
Algae/aquatic plants	No data available
Other organisms	No data available

12.2 Persistence and degradability

	Abiotic Degradation	pH
	Physical and photo-chemical elimination	UV light
	Biodegradation	Soil microflora
12.3	Bioaccumulative potential	
	Octanol/water partition coefficient (Kow)	Not determined
	Bioconcentration factor (BCF)	Not determined
12.4	Mobility in Soil	
	Known or predicted distribution to environmental compartments	HearNPV persists in the soil for a fairly long period in the immobilized state and does not accumulate.
	Surface tension	Not determined
	Absorption/desorption	Not determined
12.5	Results of PBT and vPvB assessment	
		This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
12.6	Other adverse effects	
		None
12.7	Additional information	
		None
Section 13	Disposal considerations	
13.1	Waste treatment methods	
	Product/Packaging disposal	Triple-or pressure rinse the empty container. Add the rinsings to the spray mixture in the tank. Follow provincial instructions for any required additional cleaning of the container prior to its disposal. Make the empty container unsuitable for use. Dispose of the container in accordance with provincial regulations. For information on disposal of unused, unwanted product, contact the supplier or the provincial regulatory agency. Contact the supplier or the provincial regulatory agency in cause of a spill, and for clean-up of spills.
	Waste codes/waste designations according to LoW	Not applicable
	Waste treatment-relevant information	None
	Sewage disposal-relevant information	Waste should not be disposed of by release to sewers
	Other disposal Recommendations	None
Section 14	Transport Information	
	Inland Transportation	Not restricted
	Sea Transportation	Not restricted

Air Transportation

Not restricted

Section 15 Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the mixture

Authorizations

Not relevant

Restrictions on use

Not relevant

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

Section 16 Other Information

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 their special use of this product.

Indication of Changes

Date of Review

January 17, 2023

Composed by

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