## V10

## NON-PARASITIC PLANT DISEASE CONTROL

Biological viricide for the prevention of infection by virulent Pepino mosaic virus (PepMV) strains on tomatoes grown in commercial greenhouses

## COMMERCIAL SUSPENSION

# READ THE LABEL AND PROTOCOL BEFORE USING KEEP OUT OF REACH OF CHILDREN

REGISTRATION NO.: 33583 PEST CONTROL PRODUCTS ACT

## **ACTIVE INGREDIENT:**

Mild Pepino mosaic virus isolate VX1 5-25 mg/L Mild Pepino mosaic virus isolate VC1 5-25 mg/L

# CAUTION – EYE IRRITANT POTENTIAL SENSITIZER

Warning, contains the allergen sulphites

NET CONTENTS: 1-5 L

MANUFACTURER/REGISTRANT:

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CANADIAN AGENT:

Koppert Canada Limited 3 – 40 Ironside Crescent Scarborough, ON M1X1G4 1-800-567-4195

## **NOTICE TO USER:**

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

**PRECAUTIONS:** KEEP OUT OF REACH OF CHILDREN. May cause sensitization. Avoid contact with skin, eyes or clothing. Wear waterproof gloves, long-sleeved shirt, long pants, goggles, and socks and shoes during mixing, loading, application, clean-up and repair. Wash thoroughly with soap and water after handling the product. Remove contaminated clothing and follow manufacturer's directions for cleaning/maintaining personal protective equipment (PPE) before reuse. Contains the allergen sulphites.

### **ENVIRONMENTAL PRECAUTIONS:**

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

#### FIRST AID:

If swallowed: Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

If in eyes: Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

**TOXICOLOGICAL INFORMATION:** Treat symptomatically.

**GENERAL INFORMATION**: V10 is a suspension concentrate containing the mild Pepino mosaic virus isolates VX1 of the EU strain and VC1 of the CH2 strain. V10 protects tomato plants grown in commercial production greenhouses from aggressive strains of the Pepino mosaic virus by cross-protection.

#### RESTRICTIONS

DO NOT use V10 on tomato plants grown for seed production.

V10 is only for use in greenhouse tomato production. V10 is NOT for use in tomato plant propagation facilities (tomato nurseries).

DO NOT allow transport of treated tomato plants from the greenhouse to any other tomato production facility except for the purposes of disposal (waste processing) and where there is no possibility of contaminating untreated plants in production.

The attenuated isolates in V10, VX1 and VC1, may infect other plants of the Solanaceae family (e.g. pepper, potato and eggplant) and basil. Ensure that V10-treated tomato plants are isolated from these crops as well as any other crops of the Solanaceae family.

DO NOT apply V10 by means of any type of spray or fogging application equipment.

DO NOT mix V10 with any other pest control products.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

### RESTRICTED ENTRY INTERVAL (REI): 0 hours

#### PRE-APPLICATION INFORMATION

V10 may only be applied to tomato plants that are free of Pepino mosaic virus. Prior to treatment with V10, leaf samples will be collected by representatives of Koppert Biological Systems prior to or immediately following transplanting and sent to an SGS Canada Inc. laboratory for analysis to confirm that plants are free of the Pepino mosaic virus. Contact a representative of Koppert Biological Systems for information regarding the necessary pre-application steps.

## **DIRECTIONS FOR USE**

**CROP:** Greenhouse tomato

**PEST/DISEASE:** Pepino mosaic virus (Strains CH2, EU and LP)

RATE: 0.8 L V10/ha in a total water-based application mixture of 8 L/ha

#### **APPLICATION INSTRUCTIONS:**

Refer and follow the provided detailed application procedure "Application Protocol Inoculation for Valto V10."

<u>Preparation of application mixture:</u> Before starting, put on clean clothing. Disinfect hands and shoes and put on waterproof gloves.

Determine the total area to be treated.

Shake the product thoroughly before use.

Prepare V10 as a 10% solution (e.g., 0.8 L V10 plus 7.2 L water to make 8 L V10 application mixture) and stir well.

Add synthetic sand at 15 g/L of V10 application mixture and stir well..

Use 8 L of V10 application mixture per hectare.

## **Application method:**

Moisten a clean scouring pad in the application mixture. Rub the scouring pad over the top side of a leaf, just under the head at middle height (rub with one hand and press with the other hand on the lower side of the leaf). The scouring pad should remain imbibed with the application mixture liquid so moisten it every 10-15 plants.

### Timing of application:

Make a single application to young tomato seedlings, before or after transplanting and between the 3-leaf stage and first flower open stage (BBCH 13-61). Plants must be free of PepMV at the time of application.

#### POST-APPLICATION INFORMATION

Crop maintenance should be conducted immediately after application of V10 to ensure rapid and homogeneous spread of the inoculum.

At 4-6 weeks after application of V10, leaf samples will be collected by representatives of Koppert Biological Systems for laboratory analysis in the Netherlands to confirm that treated plants have been colonized with each of the attenuated isolates, VX1 and VC1 of the EU and CH2 strains, respectively.

### DISPOSAL OF PLANT MATERIAL

At the end of the production cycle, all V10-treated tomato plant tissue must be destroyed in isolation away from all Pepino mosaic virus susceptible plants to prevent the development of new aggressive isolates resulting from the recombination of V10 with aggressive forms of the Pepino mosaic virus. V10-treated plants must NOT be composted or used as green manure.

DO NOT reuse growing media unless steam sterilized.

#### **STORAGE:**

Store refrigerated between 4 - 10°C. Use within 3 days of receipt.

#### **DISPOSAL:**

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.

- 2. Follow provincial instruction for any required additional cleaning of the container prior to its disposal.
- 3. Make the empty container unsuitable for further use.
- 4. Dispose of the container in accordance with provincial requirements.
- 5. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.