

# Talus® 70DF

## Insect Growth Regulator

SPECIMEN



BUPROFEZIN GROUP 16 INSECTICIDE

### Active Ingredient

Buprofezin:	
2-tert-butylimino-3-isopropyl-5-phenyl-1,3,5-thiadiazinan-4-one	70.0%
Other Ingredients	30.0%
<b>TOTAL</b>	<b>100.0%</b>

Contains 0.70 lb buprofezin per pound of product.

## KEEP OUT OF REACH OF CHILDREN CAUTION

**NOTICE:** Read the entire label before using. Use only according to label directions. **Before buying or using this product, read *Conditions, Disclaimer of Warranties and Limitation of Liability* at end of label booklet.**

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Manufactured for: **SePRO Corporation**  
11550 North Meridian Street, Suite 600, Carmel, IN 46032, U.S.A.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION** Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and wash before reuse.

#### FIRST AID

<b>If swallowed</b>	<ul style="list-style-type: none"> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 - 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15 - 20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>

#### HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For additional information on this pesticide product, including human health concerns and medical emergencies, call 1-800-535-5053. In case of fire or spills, information may be obtained by calling 1-800-535-5053.

**NOTE TO PHYSICIAN:** There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

### STATEMENTS FOR CONTAMINATED PPE

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### USER SAFETY RECOMMENDATIONS

#### Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change clothing.

### ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### ENVIRONMENTAL HAZARDS

For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

### DIRECTIONS FOR USE

**It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.**

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirement specific to your state or tribe, consult the State/Tribal agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

For early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, wear:

- Coveralls
- Waterproof gloves
- Shoes plus socks

### NONAGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, or greenhouses. For other uses, including golf courses and other nonagricultural uses, do not enter treated areas without protective clothing until sprays have dried.

### PRODUCT INFORMATION

Talus® 70DF insect growth regulator (hereafter referred to as Talus 70DF) is effective against the nymphal stages of whitefly, scales, psylla, mealybugs, planthoppers, and leafhoppers by inhibiting chitin biosynthesis, suppressing oviposition of adults, and reducing viability of eggs. Talus 70DF is not an adulticide. Evidence of activity may be slower than typical contact insecticides as treated susceptible pests may remain alive on the plant for 3-7 days; however, pests have stopped feeding and any feeding damage during this time is typically very low.

Talus 70DF is not disruptive to beneficial insects and mites.

Talus 70DF is a contact insecticide, so thorough spray coverage is essential. Apply by ground or air in sufficient water volume. Orient nozzles to ensure good coverage. Use of higher volume of water will ensure better coverage, especially under adverse conditions such as hot, dry weather, and/or a dense canopy. The entire field should be treated. Apply when economic infestations occur based on local information.

**Not for Sale, Sale Into, Distribution, and or Use in Nassau and Suffolk Counties of New York State.**

## INSECTS CONTROLLED

**Whiteflies:** Ash whitefly, Bandedwinged whitefly, Greenhouse whitefly, Silverleaf whitefly, Sweetpotato whitefly

**Mealybugs:** Apple mealybug, Citrus mealybug, Comstock mealybug, Gill's mealybug, Grape mealybug, Longtailed mealybug, Madeira mealybug, Mexican mealybug, Obscure mealybug, Striped mealybug, Vine mealybug

**Leafhoppers and Planthoppers:** Brown planthopper, Cherry leafhopper, Eastern grape leafhopper, Glassy-winged sharpshooter, Potato leafhopper, Variegated leafhopper, Western grape leafhopper, White apple leafhopper

## Pear Psylla

### Scales:

**Armored Scales:** Boisduval scale, Cactus scale, California red scale, Coconut scale, Fern scale, Florida red scale, Oystershell scale, San Jose scale, Walnut scale

**Margarodid Scale:** Cottony cushion scale

**Soft Scales:** Barnacle scale, Black scale, Brown soft scale, Citricola scale, European fruit lecanium scale, False oleander scale, Frosted scale, Hemispherical scale, Indian wax scale and other wax scales, Tessellated scale, White peach scale

## USE RESTRICTIONS

- Do not apply this product through any type of irrigation system.
- Not for use in Residential greenhouses.

ROTATIONAL CROP RESTRICTIONS	
CROP	PLANTBACK TIMING
All crops registered for use with buprofezin	0 days following application
All other crops	60 days following application

## RESISTANCE MANAGEMENT

For resistance management, Talus 70DF contains a Group 16 insecticide. Any insecticide population may contain individuals naturally resistant to Talus 70DF and other Group 16 insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide/acaricide resistance, take the following steps:

- Rotate the use of Talus 70DF or other Group 16 insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
  - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
  - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
  - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
  - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
  - The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide/acaricides use that includes scouting, uses historical information related

to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.

- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance contact Nichino America representatives at 888-740-7700.

## APPLICATION DIRECTIONS

Applications should be made immediately after the spray solution is prepared. Thorough spray coverage is essential for effective control. Applications may be made with high, low or ultra-low volume spray equipment that provides thorough coverage of the plant. Apply with properly calibrated spray equipment. For best results, apply when pest populations are beginning to build, before reaching economic thresholds. Consult your local agricultural advisor or state cooperative extension service, or regional SePRO Corporation Representative for recommendations.

## MIXING DIRECTIONS

Keep agitation running during filling and spraying operations. If spraying must be stopped before emptying the sprayer, resume agitation before spraying the remainder of the load. Mix only as much spray solution as can be sprayed within four hours. Storage and use of the previous day's spray mix may result in reduced activity.

**TALUS 70DF ALONE:** Fill spray tank with ¾ of the amount of water needed for the intended application and then turn on agitation. Pour recommended amount of product on the surface of water in the spray tank. Add the balance of the water to the spray tank with agitation running.

**TALUS 70DF TANK MIXTURES:** Begin with clean equipment. Fill spray tank with ¾ of the amount of water needed for the intended application and turn on agitation. If using a buffering agent, add after filling the tank with ¾ amount of water. Do not use oil as carrier or include other additives in the finished spray.

Add the recommended amount of tankmix products in the following order while maintaining agitation:

1. products in water-soluble packets
2. wettable powders
3. water-dispersible granulars and/or soluble powders
4. flowable liquids
5. emulsifiable concentrates
6. adjuvants and/or oils
7. remaining amount of water to achieve the desired level

Note: It is recommended that the compatibility of Talus 70DF in any tankmix combination be tested before use. To determine the physical compatibility with other products, use a jar test, as described below:

Using a quart (qt) jar, add the proportionate amounts of the products to 1 qt. of water. Add wettable powders and water-dispersible granular products first, then flowable liquids, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure to adding required ingredients to the spray tank.

**Read and follow all label directions for each tankmix product. Always use in accordance with the most restrictive of label precautions and limitations.**

## SPRAY DRIFT REDUCTION MANAGEMENT

Do not apply when wind speed favors drift beyond the area intended for treatment. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator is responsible for considering all of these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

### Importance of Droplet Size

An important factor influencing drift is droplet size. Small droplets (<150 - 200 microns) drift to a greater extent than large droplets. Within typical equipment specifications, applications should be made to deliver the largest droplet spectrum that provides sufficient control and coverage. Use only Medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

### Ground Applications

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application. For ground boom applications, apply

using a nozzle height of no more than 4 feet above the ground or crop canopy. For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two (2) rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

**Wind Speed Restrictions**

Drift potential increases at wind velocities of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size, canopy and equipment specifications determine drift potential at any given wind speed. Only apply this product if the wind direction favors on-target deposition. Do not apply when wind velocity exceeds 15 mph and avoid gusty and windless conditions. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

**Restrictions During Temperature Inversions**

Do not make ground applications during temperature inversions. Drift potential is high during temperature inversions. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by stable air and increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by mist or ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source. Smoke that layers and moves laterally near the ground surface in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical mixing.

**APPLICATION RATE CHART FOR TALUS 70DF**

Greenhouse Tomatoes		
Pests	Rate/Acre	Directions for Use
Leafhoppers	9.0 oz/acre	<ul style="list-style-type: none"> <li>For greenhouse tomatoes, apply by ground on 2 acre minimum with 20 gallons of water per acre.</li> </ul> <p><b>USE RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>Apply no more than 2 applications per growing cycle.</li> <li>Allow at least 5 days between applications.</li> <li>Do not apply more than 18.0 oz (1.12 lbs) per acre per growing cycle.</li> <li>Preharvest Interval (PHI): 1 day</li> </ul> <p><b>RECOMMENDATIONS</b></p> <ul style="list-style-type: none"> <li>Treatment should be applied when population level reaches economic threshold. Consult local and state agricultural authorities for details.</li> <li>Apply in sufficient water to obtain complete coverage of all plant parts. Good coverage is essential.</li> <li>Applications may be made with high volume, low volume or ultra-low volume (thermal and non-thermal foggers, misters, etc.) ground equipment only. Follow the spray equipment manufacturer's directions to determine the amount of spray solution required to obtain thorough coverage. Consult the spray equipment manufacturer's operator's manual, spray nozzle catalogs and/or your crop advisor for more information.</li> </ul>
Mealybugs	(0.56 lbs product/acre)	
Planthoppers	(0.40 lbs ai/acre)	
Whiteflies	6.0 to 9.0 oz/acre	
	(0.38 to 0.56 lbs product/acre)	
	(0.26 to 0.40 lbs ai/acre)	

Ornamental Plants		
Pests	Rate/Acre	Directions for Use
in greenhouses; lath and shadehouses; nurseries; landscape ornamentals; ground covers; field- and container-grown ornamentals; non-bearing fruit and nut trees and vines in nurseries; Christmas trees		
Leafhoppers	12.0 oz/acre	<p><b>USE RESTRICTIONS</b></p> <ul style="list-style-type: none"> <li>Make no more than 2 applications per crop per growing season.</li> <li>Do not apply more than 28.0 oz (1.76 lbs) per acre per growing cycle.</li> </ul> <p><b>RECOMMENDATIONS</b></p> <ul style="list-style-type: none"> <li>Applications may be made with high volume, low volume or ultra-low volume (thermal and non-thermal foggers, misters, etc.) ground equipment only. Follow the spray equipment manufacturer's directions to determine the amount of spray solution required to obtain thorough coverage. Consult the spray equipment manufacturer's operator's manual, spray nozzle catalogs and/or your crop advisor for more information.</li> <li>Apply the specified dosage as a foliar spray in sufficient water for complete, uniform coverage, including stems and underside of leaves. Spray to the point of runoff.</li> <li><b>Whiteflies, Leafhoppers or Planthoppers:</b> Make first application as soon as adult insects begin to appear.</li> <li><b>Mealybugs:</b> Make first application as soon as insect activity is observed.</li> <li><b>Scales:</b> Make first application when crawlers are emerging.</li> <li>If additional insecticide applications are required for control, use another class of chemistry or a different Insect Growth Regulator (IGR) with a different mode of action before making subsequent applications of buprofezin.</li> <li>Consult local or state agricultural authorities for details concerning economic thresholds for each target pest.</li> </ul>
Mealybugs	(0.75 lbs product/acre)	
Planthoppers	(0.53 lbs ai/acre)	
Scales	14.0 oz/acre	
	(0.88 lbs product/acre)	
	(0.61 lbs ai/acre)	
Whiteflies	6.0 oz/acre	
	(0.38 lbs product/acre)	
	(0.26 lbs ai/acre)	

**STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Store in original container, unopened, in a cool, dry place.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**CONTAINER HANDLING:**

**Nonrefillable container. Do not reuse or refill this container.** Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke. Do not burn, unless allowed by state and local ordinances. In most states, burning is not allowed

In case of fire or spills, information may be obtained by calling 1-800-535-5053.

By using this product, user or buyer accepts the following conditions, warranty, disclaimer of warranties, and limitations of liability.

CONDITIONS: The directions for use of this product are believed to be accurate and must be followed carefully. However, because of extreme weather and soil conditions, use methods and other factors beyond the control of SePRO Corporation (SePRO), it is impossible for SePRO to eliminate all risks associated with the use of this product. As a result, crop injury or ineffectiveness is always possible. To the extent consistent with applicable law, all such risks are assumed by the user or buyer.

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