

# Talus® 70DF

## Insect Growth Regulator



SPECIMEN

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%

**TOTAL**..... 100.0%

Contains 0.70 lbs buprofezin per pound of product.

Keep Out of Reach of Children

## CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

Refer to inside of label booklet for additional precautionary information and Directions for Use including First Aid and Storage and Disposal.

**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.

Talus® is a trademark of Nichino America, Inc.

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## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

## CAUTION

Harmful if swallowed. Wash thoroughly with soap and water after handling. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Harmful if inhaled. Avoid breathing spray mist. Remove contaminated clothing and wash before reuse.

### FIRST AID

If inhaled	<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>
If on skin or clothing	<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>
If in eyes	<ul style="list-style-type: none"><li>• 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.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
If swallowed	<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 do so by the poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>

### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-535-5053 for emergency medical treatment. 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

Follow 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:** Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

### ENGINEERING CONTROLS STATEMENT

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 requirements specific to your state or tribe, consult the 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. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

PPE required for early entry to 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, is:

- Coveralls over long-sleeved shirt and long pants
- Waterproof gloves
- Socks and chemical-resistant footwear.

### 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.

## GENERAL INFORMATION

Talus® 70DF insect growth regulator 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 insect growth regulator 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 insect growth regulator is not disruptive to beneficial insects and mites.

Talus 70DF insect growth regulator is a contact insecticide, so good spray coverage is necessary. Apply by ground or air in sufficient water volume. Orient nozzles to assure good coverage. Use of higher volume of water will assure 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.

Talus 70DF insect growth regulator is 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:** Citrus mealybug; Comstock mealybug; Gill's mealybug; Grape mealybug; Longtailed 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:

**Soft Scales:** Barnacle scale; Black scale; Brown soft scale; Citricola scale; False oleander scale; Frosted scale; Hemispherical scale; Indian wax scale and other wax scales; Tessellated scale; White peach scale  
**Armored Scales:** Boisduval scale; Cactus scale; California red scale; Coconut scale; Fern scale; Florida red scale; Oystershell scale; San Jose scale

**Margarodid scale:** Cottony cushion scale

## USE RESTRICTIONS

- Do not apply this product through any type of irrigation system.

### CROP ROTATION RESTRICTIONS

CROP	PLANTBACK TIMING
All crops registered for use with buprofezin	0 days following application
Cereal grains	30 days following application
All other crops	60 days following application

## USE PRECAUTIONS

- Apply in a minimum finished spray volume of 5 gallons per acre by air. For gallonage per acre by ground, refer to the Application Rate Chart.
- Phytotoxicity may occur in Asian pear varieties, normally limited to applications made prior to petal fall.

## RESISTANCE MANAGEMENT

Talus 70DF insect growth regulator is classified by IRAC in Group 16 – chitin biosynthesis inhibitors, and is not known to be cross-resistant to other classes of insecticides. However, insect pests are known to develop resistance to products used repeatedly. Because resistance development cannot be predicted, the use of this product should conform to resistance management strategies established for the crop and use area. Such strategies may include rotating with insecticides with different modes of action. Consult your local pest control advisor or extension office for details. If resistance to this product develops in your area, it may not provide adequate control. If you experience difficulty with control, and resistance is a likely cause, consult your local state university horticultural specialist or local agricultural authorities for the best alternative method of control. To preserve the usefulness of Talus 70DF insect growth regulator, do not make more than two consecutive applications. Prior to subsequent applications, use an alternative chemistry with a different mode of action. Always consult your local crop advisor for the most appropriate control decision for your area. Resistance management strategies advise against

applying rates lower than those recommended on the label.

**For greenhouses:** If another insect growth regulator with the same mode of action as a chitin biosynthesis inhibitor (i.e. cyromazine, diflubenzuron, and novaluron) has been used in the greenhouse within 28 days, do not apply Talus 70DF insect growth regulator as the first whitefly application.

## 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 or 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

**Talus 70DF insect growth regulator alone:** Fill spray tank with  $\frac{3}{4}$  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. 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.

**Talus 70DF insect growth regulator Tank Mixtures:** Follow all use directions as listed above under *Talus 70DF insect growth regulator Alone* with the following exception: after the Talus 70DF insect growth regulator is thoroughly mixed and the tank is  $\frac{3}{4}$  full, add the recommended amount of wettable powder, soluble powder, flowable, emulsifiable concentrate, or soluble liquid product, **while maintaining agitation**. If a spray additive is needed, add a liquid fertilizer, surfactant, or crop oil concentrate to the spray tank at this time. Then continue adding water to the tank to achieve the desired level, while maintaining agitation.

## Talus 70DF Tank Mixtures with Products in Water-Soluble

**Packaging:** Follow all use directions as listed above under *Talus 70DF insect growth regulator Alone* with the following exception: add the desired number of water-soluble bags to the tank (if allowed by their label instructions) at the same time the Talus 70DF insect growth regulator is added. **Note:** If using products in water soluble packaging, do not tank mix with products that contain boron, chromium, or other micronutrients.

## 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.

### Aerial Applications:

The spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used, and must not exceed 75% of the wing span or 80% rotor diameter. Flight speed and nozzle orientation must be considered in determining droplet size. Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind. Making applications at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

### 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 INSECT GROWTH REGULATOR

Greenhouse Tomatoes		
Pests	Rate/Acre	Notes and Use Restrictions
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><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>Pre-Harvest Interval (PHI): 1 day</li></ul> RECOMMENDATIONS <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/acre)	
Planthoppers	(0.40 lbs ai/acre)	
Whiteflies	6.0 to 9.0 oz/acre (0.38 to 0.56 lbs/acre) (0.26 to 0.40 lbs ai/acre)	

### Ornamental Plants

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

Pests	Rate/Acre	Notes and Use Restrictions
Leafhoppers	12.0 oz/acre	<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> RECOMMENDATIONS <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>Whiteflies, Leafhoppers or Planthoppers: Make first application as soon as adult insects begin to appear.</li><li>Mealybugs: Make first application as soon as insect activity is observed.</li><li>Scales: 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 lb/acre)	
Planthoppers	(0.53 lbs ai/acre)	
Scales	14.0 oz/acre (0.88 lb/acre) (0.61 lbs ai/acre)	
Whiteflies	6.0 oz/acre (0.38 lb/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. Triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ 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, 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.

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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