

ASTUN®

ACTIVE INGREDIENT:

Isofetamid* 36.0%

OTHER INGREDIENTS: 64.0%

Total 100.0%

*N-[1,1-dimethyl-2-[2-methyl-4-(1-methylethoxy)phenyl]-2-oxoethyl]-3-methyl-2-thiophenecarboxamide

Contains 3.33 pounds Isofetamid Per Gallon (400 grams per liter)

EPA Reg. No. 71512-23-59807

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

If swallowed	<ul style="list-style-type: none"> • Call a poison control center 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 center or doctor. • Do not give anything by mouth to an unconscious person.
If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of soap and water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

HOT LINE NUMBER

For **24-Hour Medical Emergency Assistance** (Human or Animal) Call **1-800-356-4647**
For **Chemical Emergency**, Spill, Leak, Fire or Accident, Call **CHEMTREC 1-800-424-9300**

See inside booklet for Precautionary Statements and Directions for Use.

Read entire label carefully and use only as directed.

Net Contents: 1 Quart (946 ml)



Produced for:

OHP, Inc.
5151 McCrimmon Pkwy, Ste 275
Morrisville, NC 27560-5425
(800) 356-4647

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PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear long-sleeved shirt and long pants, socks, shoes, and chemical resistant gloves made of any waterproof material.

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.

Engineering Control Statements

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.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- 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 into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to oysters. 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 waters when disposing of equipment washwaters or rinsate. Do not apply when weather conditions favor drift from the treated areas. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator is responsible for considering all these factors when making decisions. Where states have more stringent regulations, they must be observed.

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.

FAILURE TO FOLLOW THE USE DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL.

ASTUN® is a flowable suspension concentrate for control of diseases on ornamental plants. Intended for use only by professional applicators.

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 twelve (12) hours.

PPE required 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, is: coveralls, chemical resistant gloves made of any waterproof material, shoes plus socks.

Sod and seed farms, commercial greenhouses and nurseries are within the scope of the Worker Protection Standard.

NON-AGRICULTURAL 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, nurseries, or greenhouses. Turfgrasses on golf courses and other non-residential turf areas such as industrial parks, tank farms, professionally managed college and professional sports fields, commercial lawns and ornamental landscapes are not within the scope of the Worker Protection Standard.

Keep children, pets, and unprotected persons out of the treated area until sprays have dried.

PRODUCT INFORMATION

ASTUN is a fungicide with preventative, systemic and curative properties for the control of diseases on ornamental plants. **ASTUN** should be used in a regularly scheduled preventative spray program and used in rotation with products with a different mode of action. For control of other diseases not listed on this label, **ASTUN** may be tank mixed with other fungicides. Tank mixes should follow the use instructions on both labels for application rate and application timings. Failure to follow these instructions may result in inferior disease control and/or phytotoxicity.

Although **ASTUN** has been evaluated on several ornamental cultivars, varieties and hybrids with no indication of phytotoxicity, neither the manufacturer nor seller have determined adequate tolerance on ornamental plants under all conditions. The user should determine if **ASTUN** can be used safely for commercial use by applying the labeled rate to a small test area under conditions to be expected and monitor for adverse effects before applying **ASTUN** to the targeted area.

USE RESTRICTIONS

- Do not apply more than 2.65 lb. ai per acre per year on ornamental plants.
- Do not apply **ASTUN** by aerial application.
- Intended for use only by professional applicators.

INTEGRATED PEST MANAGEMENT

ASTUN is an excellent disease control agent when used according to label directions. Although **ASTUN** has preventative, systemic and curative activity, it should be applied as a protectant fungicide before visible symptoms of the disease occur.

ASTUN is recommended for use as part of an Integrated Pest Management (IPM) program, which may include the use of disease-resistant crop varieties, cultural practices, biological disease control agents, pest scouting and disease forecasting systems aimed at preventing economic pest damage. Practices known to reduce disease development should be followed. Consult your state cooperative extension service or local agricultural authorities for additional IPM strategies established in your area. **ASTUN** may be used in State Agricultural Extension advisory (disease forecasting) programs that recommend application timing based upon environmental factors that favor disease development.

RESISTANCE MANAGEMENT

Some plant pathogens are known to develop resistance to products used repeatedly for disease control. **ASTUN**'s mode/target site of action is complex II; succinate-dehydrogenase, FRAC Group 7. A disease management program that includes alternation or tank mixes between **ASTUN** and other labeled fungicides that have a different mode of action and/or control pathogens not controlled with **ASTUN** is essential to prevent disease resistant pathogens populations from developing. **ASTUN** should not be utilized continuously nor tank mixed with fungicides that have shown to have developed fungal resistance to the target disease.

For resistance management, **ASTUN** contains a Group 7 fungicide. Any fungal population may contain individuals naturally resistant to **ASTUN** and other Group 7 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance, take one or more of the following steps:

- Rotate **ASTUN** or other Group 7 fungicides within a growing season with different groups that control the same pathogens.
- Use tank mixtures with fungicides from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an integrated disease management program for fungicide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.

Since pathogens differ in their potential to develop resistance to fungicides, follow the directions outlined in the "**Directions for Use**" section of this label for specific resistance management strategies. Consult with your Federal or State Cooperative Extension Service representatives for guidance on the proper use of **ASTUN** in programs that seek to minimize the occurrence of disease resistance. **ASTUN** is not cross-resistant with other classes of fungicides that have different modes of action.

MIXING AND SPRAYING

For maximum efficacy **ASTUN** should be applied prior to or in the very early stages of disease development. **ASTUN** must be applied at the label rates and timings listed in the **Directions for Use** section. Slowly invert container several times to assure uniform mixture of formulation before adding this product to the spray tank. The required amount of **ASTUN** should be added slowly into the spray tank during filling. With concentrate sprays, pre-mix the required amount of **ASTUN** in a clean container and add to the spray tank as it is being filled. Keep agitator running when filling spray tank and during spray operations. DO NOT allow spray mixture to stand overnight or for prolonged periods. Prepare only the amount of spray required for immediate use. Spraying equipment should be thoroughly cleaned immediately after the application.

Under conditions favorable for disease development, the highest rate specified and shortest application interval should be used.

ASTUN may be applied with all types of spray equipment normally used for ground applications on ornamental plants.

TANK MIX COMPATIBILITY

ASTUN is physically compatible (no nozzle or screen blockage) with many products labeled for control of diseases and insects on ornamental plants. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations and directions for use on all product labels

involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. **ASTUN** is generally compatible with other insecticides, fungicides, adjuvants, fertilizers and micronutrient products provided sufficient free water is available for dispersion of all the tank mix products. Under some conditions, the use of adjuvants and/or surfactants at the rate of 0.025% to 0.1% of the spray tank volume may improve the performance of **ASTUN**. However, the physical compatibility of **ASTUN** with tank mix partners must be evaluated before use. Conduct a jar test with intended tank-mix pesticides prior to preparation of large volumes. Use the following procedure: 1) Pour the recommended proportions of the products into a suitable container of water; 2) Mix thoroughly and; 3) Allow to stand for 5 minutes. If the combination remains mixed or can be re-mixed readily, it is considered physically compatible. Any physical incompatibility in the jar test indicates that **ASTUN** should not be used in the tank-mix.

User should note that not all ornamental plant varieties have been tested with all possible tank mix combinations. Thus the combination should be tested for safety on a small portion of the target plant to ensure that a phytotoxic response will not occur.

ORNAMENTAL PLANTS

Table 1. Application Rates and Intervals on Ornamentals

Disease	Rate (fl oz/100 gal)	Rate (fl oz/acre)	Instructions
Gray Mold (<i>Botrytis cinerea</i>)	10 to 17 fl oz (0.260 to 0.442 lb ai/100 gal)	10 to 17 fl oz (0.260 to 0.442 lb ai/A)	Container and Field Grown (Bed) Plants ASTUN can be applied to container and field grown (bed) ornamentals, including conifers, grown in containers in greenhouses and outdoor nurseries.
Cercospora Leaf Spot (<i>Cercospora</i> spp.)	13.5 to 17 fl oz (0.351 to 0.442 lb ai/100 gal)	13.5 to 17 fl oz (0.351 to 0.442 lb ai/A)	For Gray Mold, Alternaria Leaf Spot and Cercospora Leaf Spot diseases apply ASTUN as a foliar spray in sufficient spray solution to thoroughly wet the foliage to the point of run-off, generally not to exceed 100 gallons per acre. If a larger volume is needed to wet the foliage, do not exceed the maximum rate of 17 fl oz per acre.
Diseases caused by <i>Sclerotinia</i> such as White Mold, Petal Blight, and Crown and Basal Rot (<i>Sclerotinia sclerotiorum</i>) <u>Suppression of:</u> Alternaria Leaf Spot (<i>Alternaria</i> spp.) <u>Suppression of:</u> Rhizoctonia Root and Crown Rot (<i>Rhizoctonia solani</i>)	17 fl oz (0.442 lb ai/100 gal)	17 fl oz (0.442 lb ai/A)	For Rhizoctonia Root and Crown Rot and diseases caused by <i>Sclerotinia</i> , apply ASTUN as a directed spray to both the stem and foliage. For certain diseases caused by <i>Sclerotinia</i> that occur only on foliage and/or flowers ASTUN may be applied as a foliar-only spray. For Fusarium Root and Crown Rot, apply ASTUN as a heavy, coarse spray to both the foliage and soil (sprench) at a spray solution volume such that the foliage is soaked and the soil thoroughly drenched which may require spray solutions greater than 100 gallons per acre. Do not exceed the maximum rate of 17 fl oz per acre (0.4 fl oz per 1,000 sq ft).
<u>Suppression of:</u> Fusarium Root and Crown Rot (<i>Fusarium oxysporum</i>)	N/A	17 fl oz (0.442 lb ai/A) or	Applications of ASTUN should begin when conditions are favorable for disease development or when plants first exhibit disease symptoms, from germination to mature

		0.4 fl oz/1,000 sq ft (0.01 lb ai/1,000 sq ft)	<p>crop. Within the rate range, use the lower rate and shortest interval and the higher rate at the longest interval. When disease is severe use the highest rate at the shortest interval.</p> <p>Make applications on a 7-14 day interval.</p> <p>Do not apply more than two consecutive applications of ASTUN or other Group 7 containing fungicides before rotating to a registered fungicide with a different mode of action. Do not apply the next application of ASTUN within 28 days of the previous two consecutive ASTUN applications.</p> <p>Do not make more than 6 applications of ASTUN per acre per year. (Maximum annual application is 102 fl oz/acre (2.65 lb ai/acre)).</p> <p>In the State of New York, the maximum annual application is 68 fl oz/acre (1.77 lb ai/acre) on ornamental plants.</p>
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STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Store in original container, in a secured, dry, cool place separate from fertilizer, food, and feed. Avoid cross-contamination with other pesticides.

PESTICIDE DISPOSAL: Pesticide wastes may be hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING: Nonrefillable container (equal to or less than 5 gallons). DO NOT reuse or refill this container. Triple rinse container (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 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.

WARRANTY AND LIMITATION OF DAMAGES

Seller warrants to those persons lawfully acquiring title to this product that at the time of first sale of this product by Seller that this product conformed to its chemical description and was reasonably fit for the purposes stated on the label when used in accordance with Seller's directions under normal conditions of use. To the extent consistent with applicable law, Buyers and users of this product assume the risk of any use contrary to such directions. **EXCEPT AS PROVIDED ELSEWHERE IN WRITING CONTAINING AN EXPRESS REFERENCE TO THIS WARRANTY AND LIMITATION OF DAMAGES, SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OR GUARANTY, INCLUDING ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY, AND NO AGENT OF SELLER IS AUTHORIZED TO DO SO.** In no event shall Seller's liability for any breach of warranty or guaranty exceed the purchase price of the product as to which a claim is made. To the extent consistent with applicable law, Buyers and users of this product are responsible for all loss or damage from use or handling of this product which results from conditions beyond the control of Seller, including, but not limited to, incompatibility with other products unless otherwise expressly provided

in Directions for Use of this product, weather conditions, cultural practices, moisture conditions or other environmental conditions outside of the ranges that are generally recognized as being conducive to good agricultural and/or horticultural practices.

ASTUN is a registered trademark of Ishihara Sangyo Kaisha, Ltd.

OHP, Inc.
5151 McCrimmon Pkwy, Ste 275
Morrisville, NC 27560-5425
(800) 356-4647

SPECIMEN