



January 28th, 2022

Rachel Stephenson
Chemical Review Manager, PCNB Case 0128
Office of Pesticide Programs
U.S. Environmental Protection Agency

Re: EPA-HQ-OPP-2015-0348; AMVAC Response for public comment period to Draft Risk Assessments for Conventional Uses for Pentachloronitrobenzene, PCNB, (Case 0128)

Dear Ms. Stephenson:

Amvac Chemical Corporation (AMVAC) appreciates the opportunity to publicly comment on the benefits of PCNB to the US marketplace during the comment period announced on October 29th 2021 via FRL 2021-23531 Notice FR 86 207 p. 60036-60038. Specifically, this docket response contains a public interest evaluation study from AMVAC entitled: A Benefits Document Supporting the Reregistration of Pentachloronitrobenzene (PCNB).

AMVAC appreciates EPA's consideration of the attached study. If you have any questions I can be contacted per below.

Regards,

A handwritten signature in black ink that reads "Niamh McMahon".

Niamh McMahon
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Title

**A Benefits Document Supporting the Reregistration of
Pentachloronitrobenzene (PCNB)**

Data Requirements

NA

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26 January 2022

Performing Facility/Laboratory

AMVAC Chemical Corporation

Sponsors

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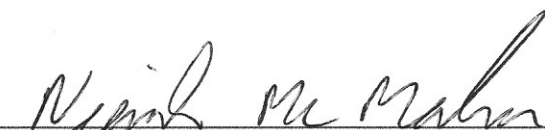
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STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

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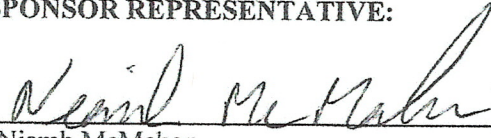
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January 26th 2022
Date

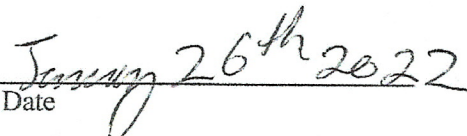
**STATEMENT OF COMPLIANCE WITH GOOD LABORATORY PRACTICE
STANDARDS**

The following is a detailed description of all differences between practices used in the study and those required by 40 CFR 160: This is a benefits summary document and does not meet the requirements of the United States Environmental Protection Agency Title 40 Code of Federal Regulations Part 160. No new data was generated.

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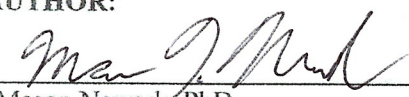


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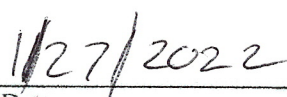


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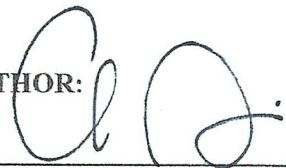


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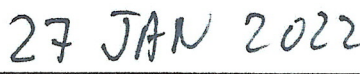


Date

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Table 1. PCNB Products Sold by Market Segment

Active Ingredient(s) Name	Brand Name	Registration Number	Market Segment	Formulation type
PCNB	Blocker® 4F (ABN Autilus)	5481-8992	Disease control for potatoes and cole crops	FC
	Blocker® 10G	5481-8988		Granule
	Turficide® 400 (ABN Turficide 4F)	5481-8992	Disease control for golf courses	FC
	Turficide® 10G	5481-8988	Disease control for golf courses	Granule
	Terraclor® 400	5481-8992	Disease control in Ornamental plants; Specialty Bulb Dip	FC
PCNB + Tebuconazole	Premion® (ABN Oreon™)	5481-585	Disease control for golf courses	SC
PCNB + Chlorothalonil + Propiconazole	FF III™ (ABN AMVAC 3-way snow mold fungicide)	5481-614	Disease control for golf courses	Granule

Table 2. Pesticide and Brand Names Referenced in this Document

Active Ingredient(s) Name	FRAC group number	Brand Name	EPA Registration Number
PCNB	14	(Refer to Table 1)	(Refer to Table 1)
fluazinam	29	Secure®	71512-20-100
cyazofamid	21	Ranman®	71512-3
thiophanate-methyl	1	3336F	1001-69
penthiopyrad	7	Velista®	100-1534
pyraclostrobin	11	Insignia® SC Intrinsic	7969-290
boscalid	7	Emerald®	7969-196
iprodione	2	26GT	432-888
fludioxonil	12	Medallion®	100-1448
fosetyl-Al	33	Signature™ XTRA Stressgard®	432-1541
tebuconazole	3	Mirage® Stressgard®	432-1529
chlorothalonil	M5	Daconil WeatherStik®	50534-209-100
flutolanil	7	Prostar® 70WG	432-1223
chlorothalonil, propiconazole	M5 & 3	Concert® II	100-1347

propiconazole	3	Banner Maxx® II	100-1326
mineral oil	NC	Civitas Turf Defense™	69526-17
azoxystrobin	11	Heritage® TL	100-1191
iprodione and trifloxystrobin	2 & 11	Interface® Stressgard®	432-1505
benzovindiflupyr, difenoconazole	7 & 3	Contend™ A	100-1477
azoxystrobin, propiconazole	11 & 3	Contend™ B	100-1540
chlorothalonil, iprodione, thiophanate-methyl, tebuconazole	1, 2, 3 & M5	Enclave®	53888-309
chlorothalonil, propiconazole, fludioxonil	3, 12 & M5	Instrata®	100-1231
azoxystrobin	11	Heritage® 50WDG	100-1093
triticonazole	3	Triton™	432-1487
mefentrifluconazole	3	Maxtima®	7969-404
polyoxin D	19	Affirm™ WDG	68173-3-1001

Table 3 Disease Names

Common name	Scientific name
Clubroot	<i>Plasmodiophora brassicae</i>
Black dot	<i>Colletrichum coccoides</i>
Sclerotinia	<i>Sclerotinia sclerotiorum</i>
Anthracnose	<i>Colletotrichum cereale</i>
Snow mold, gray	<i>Typhula incarnata</i>
Snow mold, pink	<i>Microdochium nivale</i>
Snow mold, speckled	<i>Typhula ishkariensis</i>
Black scurf	<i>Rhizoctonia solani</i>
Common Scab	<i>Streptomyces scabies</i>

Abbreviations used in the document

- **A.I.** - Active Ingredient
- **BEAD** - Biological and Economic Analysis Division (EPA)
- **EC**- Emulsifiable concentrate
- **FC** - Flowable concentrate
- **Fl. Oz.** – Fluid ounce.
- **FRAC** – Fungicide Resistance Action Committee
- **IPM** – Integrated pest management.
- **lb** – Pounds.
- **MoA** – Mode of action. The mode of action is the overall way a pesticide affects a target pest at the tissue or cellular level.
- **QoI** - Quinone outside inhibitors
- **DMI** – Demethylation Inhibitor
- **SDHI**- Succinate dehydrogenase inhibitors
- **WDG** - Water dispersible granule

Overview

PCNB is currently undergoing registration review by the EPA. As part of this process, EPA is reviewing all available data to assess PCNB use. This document represents the registrant's statement of public interest benefits that continued registration of PCNB will bring as well as outlining the justification for those statements in both agricultural and non-crop segments of the US marketplace.

PCNB is registered on numerous agriculture and non-agricultural use sites, including potatoes, cole crops, seedling bedding plants of those crops, ornamentals (field, pots, nurseries, bulb dips), southern Magnolia trees, pine planting nurseries and turfgrass disease management for golf courses, athletic fields, sod farms and industrial parks. PCNB is a non-systemic fungicide that blocks the progression of disease by inhibiting lipid and membrane synthesis of the fungi and by halting the sporulation process. The mode of action of PCNB is unique, as there are no other commercially available fungicides with the same mode of action (Brent and Holloman, 2007a, FRAC, 2017). As a stand-alone product, PCNB is an effective option for blocking the advancement of tough diseases such as Black Scurf (*Rhizoctonia*) and Clubroot through its anti-sporulation and multi-site modes of action. The performance of PCNB has been proven over the last 50 years, without the development of resistance of any kind. This is a claim few fungicides can make.

Resistance management is an important component in integrated pest management (IPM). One key factor in successful resistance management in agriculture is either the tank mixing or rotation of various fungicides with complementary modes of action. (Brent and Holloman, 2007b). PCNB, with its unique mode of action is the ideal foundation¹ fungicide for soil-borne and foliar disease control programs, allowing growers to get better performance from applications of other fungicides, while helping preserve the usefulness of all within a resistance management program. PCNB in the tank serves as a complement to other products on the market, helping a grower's entire fungicide program perform better against a broad spectrum of tough diseases for yield and quality improvements. In turfgrass disease management widespread resistance of anthracnose to benzimidazole and QoI fungicides is recognized, and many strains have also demonstrated reduced sensitivity to DMI fungicides. PCNB is the only Group 14 fungicide labeled for use on turfgrass for anthracnose control and so PCNB has important roles in both controlling anthracnose and managing its development of resistance to fungicides.

Further, it is important to note that scientific experts in all agronomic disciplines have modified their approaches to resistance management within the last few years. They no longer advocate for thresholds of pest control for economic benefits. Pathologists, Entomologists and Weed Scientists now advise growers and pest control operators to use a zero-pest tolerance approach to minimize resistance. That is complete control of the pest species is needed to minimize resistance. See for example (accessed 1/25/2022):

<https://www.frac.info/fungicide-resistance-management/background>

¹ Rutgers University defines a foundation treatment as "These programs consist of a protectant fungicide (Prot) tank mixed with an at-risk systemic fungicide of a single chemistry. This should be a familiar tactic." [Integrated Fungicide Programs for Early Season Apple Disease Control — Plant & Pest Advisory \(rutgers.edu\)](#) (accessed 26 January 2022)

PCNB is known to inhibit germination and hyphal growth of fungi. Although some details on the exact mechanism of action(s) remain unclear it is postulated that the mechanism might competitively inhibit inositol synthesis (Rich 1960), but others have found PCNB inhibition of *Aspergillus nidulans* with the addition of inositol to the culture did not improve upon growth retardation. Antifungal activity has also been linked to a typical process exhibited of other aromatic hydrocarbons on lipid peroxidation activity (Edlich, 1992). Other researchers have suggested that the activity is related to disruption of the cellular membrane due to the lipophilic nature of PCNB. Regardless of this uncertainty, studies indicate that the effect appears to be complex, but does have some relationship to other chloronitrobenzenes and chloroanilines (Tas, 2014). This complexity in the elucidation of the exact mechanism of activity of PCNB, no doubt contributes to the robust resistance management features of PCNB. The difficulty that fungal diseases have in overcoming this product is best illustrated by the fact that PCNB remains highly efficacious after many decades of use without any field evidence of resistance. FRAC validates this statement by denoting PCNB as having a low resistance risk (FRAC Code List 2018).

This document will further focus on the specific benefits PCNB brings to disease management in crops labelled for use such as potatoes, cole crops and ornamental bulbs. In addition, PCNB plays a critical role in turfgrass disease management showing benefits in every mixture studied.

Crop statement of benefit

Potatoes: PCNB is a foundation product in potatoes; with proven efficacy against several economically important soilborne fungi including: *Rhizoctonia solani*, *Collettrichum coccoides*, and *Sclerotinia sclerotiorum*. All these pathogens listed above are either saprophytic (*R. solani*) or can survive extended periods with the formation of sclerotia (*C. coccoides* and *S. sclerotiorum*). Consequently, these soilborne pathogens are best controlled with both chemical and non-chemical management strategies. Non-chemical management can include culture controls, such as removing weed hosts, fertility/irrigation management, and crop rotations. However, the long-lived nature of these pathogens necessitates the use of chemical control in order to protect the plant and meet resistance management best practices. While there are several fungicides available, many of these same molecules also have uses against foliar diseases as well as soil-borne pathogens. PCNB as a soil-only-applied fungicide in potato, which means it allows growers a “second mode of action” to combat resistance. This allows a grower to save those fungicides that normally would go towards soilborne fungi to be used against foliar pathogens. (Wharton and Wood, 2013).

PCNB also has a FIFRA 2ee recommendation for common scab (*Streptomyces scabies*), which is a historically difficult pathogen to control. “No single measure provides effective control of scab, but the disease can be managed using an integrated approach that combines the use of host resistance and cultural control methods”, indicates Michigan State University Potato Disease Guidelines, 2015 (Wharton P. E2990). The number of fungicides available for common scab is mainly limited to soil fumigants, with PCNB being a rare, if not unique, in-season chemical treatment (Wharton et al, 2007). The loss of this product would have economic consequences for potato seed producers where it is utilized to preserve quality and integrity within production of seed potatoes. For

commercial potato growers the poorer aesthetics due to presence of common scab decreases the (grade and) value of their crop at market.

Cole Crops: PCNB has been used for many years in cole crop to control one main pathogen, clubroot (*Plasmodiophora brassicae*). It is proven chemistry that is highly effective in the control of clubroot. This pathogen is not a true fungus, but rather a Phytophthora (Schwelm et al. 2018). Because it is not a true fungus and not an oomycete, there are relatively few chemical control options. Most management recommendations are cultural controls, including long rotations and soil pH adjustment above 7.0 (Donald and Porter, 2009). PCNB is one of the few products commercially available to treat clubroot in-season. As with potatoes, the alternative chemistries, fluazinam and cyazofamid, also have economically important foliar pathogen targets in addition to clubroot. By using PCNB at planting to control clubroot, growers are able to reserve alternative products for foliar diseases, such as downy mildew (Wells et al, 2021). This prevents overuse and/or over-reliance on one chemical or class, a key strategy to prevent resistance developing to that chemistry.

Justification for the reregistration of PCNB for potatoes and cole crops

Resistance management

The FRAC classifies fungicides by mode of action, these classifications are then organized by specific groups. This grouping allows growers to quickly identify whether two fungicides are in the same group, thus aiding in proper resistance management. These groups are also ranked in their risk of developing resistance; this risk is usually based on reported cases of resistance in the field. EPA has adopted FRAC codes for MoA clarity on its labels to aid in resistance management.

Another important aspect of FRAC is building and disseminating resistance management techniques. These practices are designed to minimize resistance and maximize the lifespan of fungicide effectiveness. One common technique is to rotate fungicides by different groups. Rotations work best when there are multiple classes of fungicides. PCNB is a distinct class of fungicide, a group 14 (target site code F3), which can be used with other fungicides, either as a rotation or a tank mixture. One common strategy is to use PCNB at-plant and use other fungicides throughout the season. By starting the season with PCNB, growers are able to save higher risk fungicides for later in the season or forego them in low-pressure seasons. PCNB is the ideal foundation fungicide for soil-borne disease allowing growers to get better performance from applications of other fungicides, while helping preserve their usefulness within a resistance management program.

Alternatives to PCNB

While there are alternatives to PCNB, they are not without concerning drawbacks, namely having high risk of resistance. Over dependence or continuous use of such fungicides can quickly lead to them becoming ineffective and obsolete tools against the pathogen. Most of the alternatives to PCNB are either succinate dehydrogenase inhibitors (SDHI), FRAC group 7, or quinone outside inhibitors (QoI), FRAC group 11. Cyazofamid (FRAC group 21) is ranked as

medium to high risk of resistance development. Resistance has been reported in *Phytophthora capsici* (Kousik and Keinath, 2008). Fluazinam (FRAC group 29), while ranked as having low resistance risk, *Botrytis* has been reported to be resistant in Japan. These are all single-site fungicides, and as a result, these fungicides tend to have higher risk of resistance development. (FRAC, 2017)

For potatoes, *Rhizoctonia solani* is controlled with PCNB, azoxystrobin, and flutolanil. Both azoxystrobin (FRAC group 11) and flutolanil (FRAC group 7) are medium to high risk of developing resistance. For black dot, the BEAD report (USEPA 2015) lists fluazinam (FRAC group 29, low risk), thiophanate-methyl (FRAC Group 1, high risk), boscalid (FRAC group 7, medium to high risk), and iprodione (FRAC group 2, medium to high risk) as alternatives. Most of these alternatives have medium to high risk of resistance development.

For cole crops, clubroot (*Plasmodiophora brassicae*) has very few fungicides that have shown efficacy. While fumigants are effective, there are several limitations to their use, including buffer zones, extended pre-plant intervals, and a lack of residual control. Currently, there are only three fungicides registered for preplant or in-season use. They are: PCNB (FRAC group 14), Cyazofamid (FRAC Group 21), and Fluazinam (FRAC Group 29). While Fluazinam is rated as low risk, cyazofamid is rated as high risk. By using PCNB at preplant, single site fungicides may be used later in the season for extended disease control.

PCNB has relatively low resistance risk (FRAC Code List 2018). According to FRAC, the group 14 fungicides are active in lipid peroxidation. These modes of action are low to medium risk, with no field resistance reported. This unique complex mode of action allows for more robust resistance management strategies to be implemented. If the molecule were to be discontinued, a higher risk fungicide, such as azoxystrobin, would need to be used earlier, thus allowing resistance to develop earlier in the season. Without PCNB, growers will have one less class of fungicide to combat important soilborne diseases in economically important crops, such as potatoes and cole crops.

Non-crop statement of benefit

Since the last comprehensive EPA BEAD review of PCNB in 2012, AMVAC has developed two new use patterns for this active ingredient in turfgrass management. After more than 50 years of use, it was discovered that PCNB is extremely effective against anthracnose, which is a Top 3 disease of turfgrass. There is now widespread resistance by anthracnose to benzimidazole and QoI fungicides and many strains have also demonstrated reduced sensitivity to DMI fungicides. PCNB is the only Group 14 fungicide labeled for use on turfgrass and it is, demonstratively, the most effective active ingredient against anthracnose. Best Management Practices recommend using as many (fungicide modes of action) as possible in an anthracnose management program (Anonymous 2015). Thus, PCNB, as in crop uses described above, has important roles in both controlling anthracnose and managing its development of resistance to fungicides.

AMVAC has also spent the last decade refining the way PCNB is used as a snow mold fungicide. PCNB on its own has been widely used because of its relatively low cost and its proven efficacy for managing snow mold pathogens. These turf diseases are not just cosmetic in nature and the grass cannot outgrow the damage. Because golf course turf is groomed at a very low height, it has few reserves and extensive damage may result in the death of grass in large areas. Both grey and pink snow molds can kill turf. AMVAC continues to research the use of reduced application rates of PCNB when used in combination with other fungicide active ingredients (and have brought such products to market). This approach is beneficial for reduction of pounds of PCNB utilized for golf course disease management without sacrificing performance.

Much research in turfgrass disease management focuses on programs of complimentary applications of different AIs. This document will feature many of the recommended programs from researchers and our competitors that attempt to showcase their individual products within such programs. AMVAC will show that treatment programs that combine reduced application rates of PCNB in combination with other fungicide active ingredients provide consistently high levels of snow mold control that cannot be equaled by treatments that do not contain PCNB. This is especially true when winter conditions evolve that cause treatments which do not contain PCNB to falter. It is known that PCNB is the most effective active ingredient for snow mold control under the most challenging of conditions.

As in turf, PCNB is the only FRAC 14 fungicide product registered for management of significant pathogens in ornamental crops, particularly nursery grown conifers, flowering bulb crops and greenhouse grown flowering plants, of particular significance are root and crown diseases including Rhizoctonia and Sclerotinia for which PCNB is the only group 14 fungicide that is effective and available to growers that manage these diseases by fungicide rotations through the growing season.

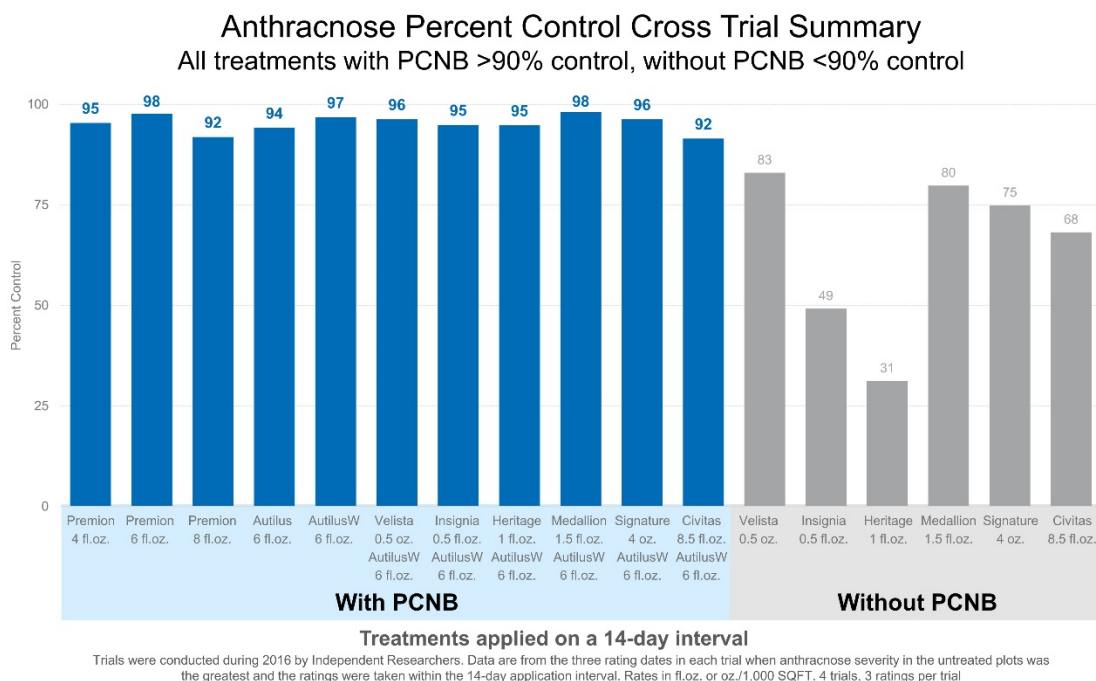
Justification for the reregistration of PCNB in turf grass disease management

PCNB for Anthracnose Control:

PCNB was first evaluated for anthracnose control by researchers at Penn State University in 2013. The first public report of its effectiveness was published shortly thereafter (Uddin et.al., 2015). A group of core anthracnose researchers from the northeastern U.S. subsequently reported their research with PCNB during 2014 and 2015 in the industry publication *Golfdom* (Aynardi et.al., 2016). AMVAC has supported PCNB research for anthracnose control with 19 researchers at 15 universities and 3 private contract research companies. To date, fifty-six field trials have been conducted that include PCNB treatments for anthracnose control. An analysis of this database shows that PCNB is, demonstratively, the most effective single active ingredient for anthracnose control in turfgrass. Based on its unique mode of action, it has a key role to play in anthracnose resistance management, which aligns with the recommendations in Rutgers University's Best Management Practices for Anthracnose Control (Anonymous, 2015).

In 2016, anthracnose researchers at Rutgers University, the University of Connecticut, Penn State University, and Turfgrass Disease Solutions evaluated PCNB in combination with other fungicide active ingredients that had a history of use against anthracnose. The results of these trials are shown in Figure 1. Each mean is the average of 12 data points – three data points from each of the four trials - that were taken when disease pressure was greatest in the untreated plots and the ratings were made within the 14-day application interval. The product identified as Autilus W is a water-based formulation of Turfcide 400. It is very interesting to note that every treatment that included PCNB provided greater than 90 percent control and the treatments that did not contain PCNB did not achieve 90 percent control.

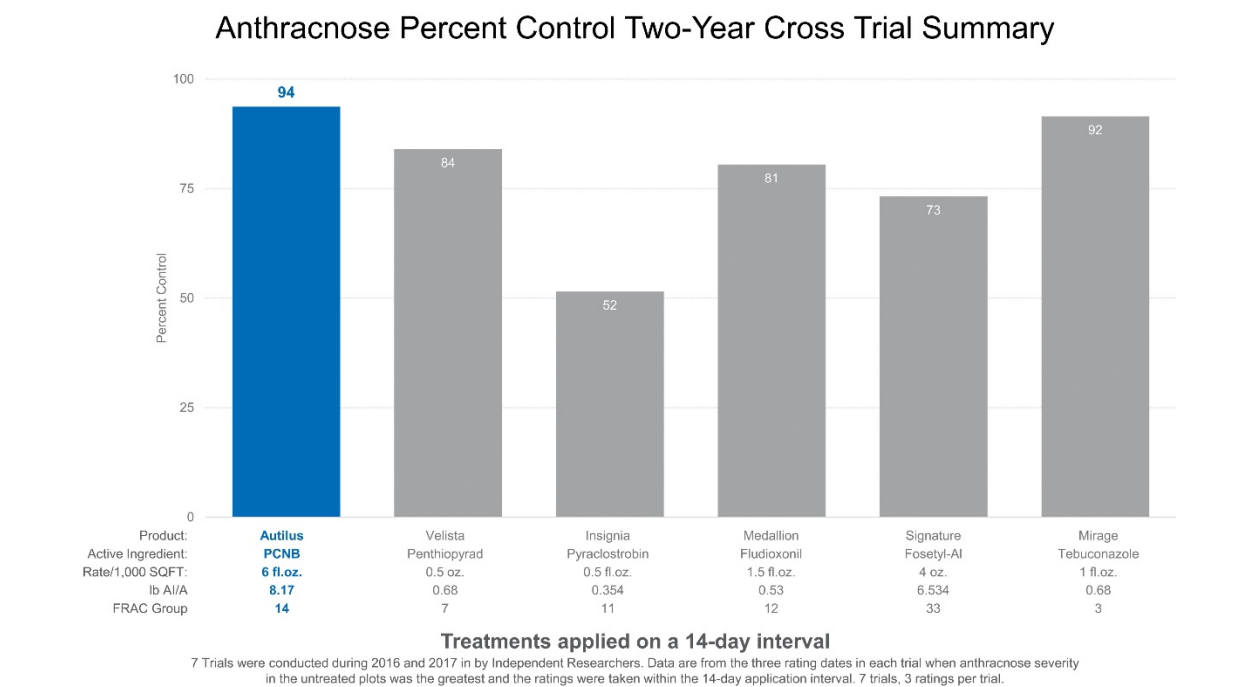
Figure 1



Alternatives to PCNB for Anthracnose Control

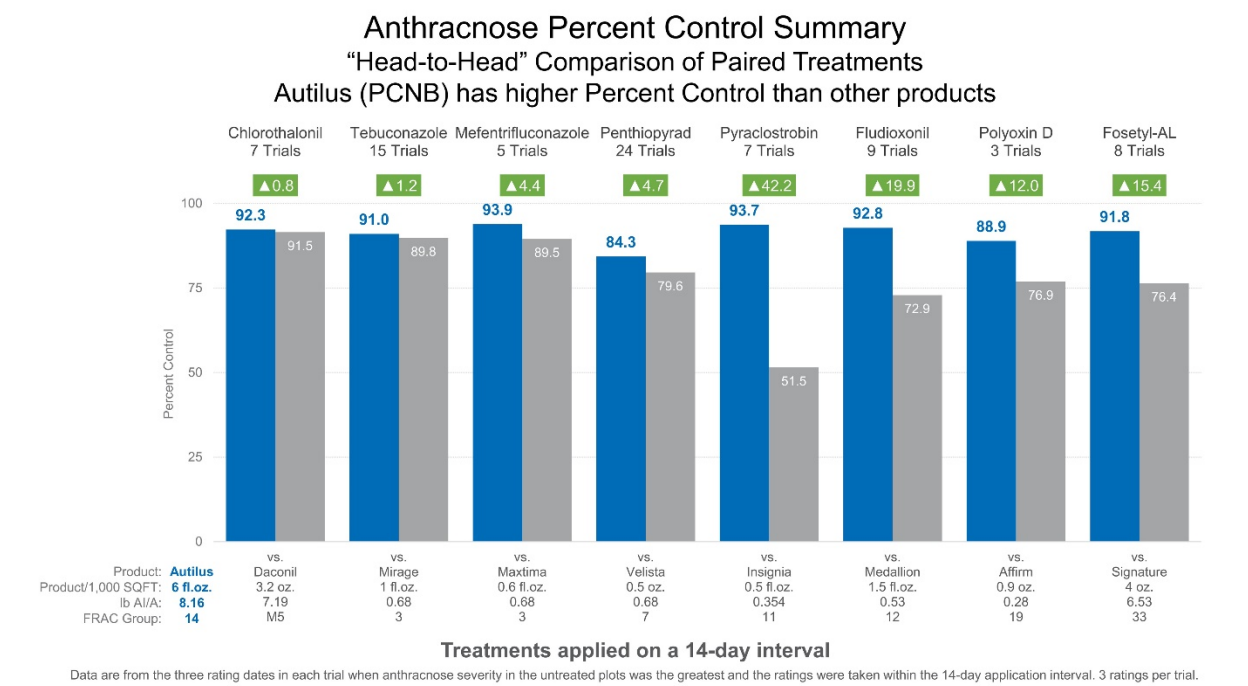
Research data from 2016 and 2017 allow for the direct comparison of anthracnose efficacy by PCNB to that of representative active ingredients from other fungicide mode of action groups that have activity against anthracnose (Figure 2). Data from seven field trials are included in this comparison. Three data points were included from each trial corresponding to the dates when anthracnose severity was greatest in the untreated plots and the rating was made within the application interval. These results show that anthracnose control provided by PCNB was numerically superior to that provided by penthiopyrad (FRAC Group 7), pyraclostrobin (FRAC Group 11), fludioxonil (FRAC Group 12), fosetyl-Al (FRAC Group 33) and tebuconazole (FRAC Group 3).

Figure 2



AMVAC's anthracnose database also allows direct paired comparisons of anthracnose control provided by PCNB to that provided by another fungicide active ingredient labeled for anthracnose control (Figure 3). These are "head-to-head" comparisons meaning that both treatments were included in each field trial used in the comparison. Three data points were included from each trial corresponding to the dates when anthracnose severity was greatest in the untreated plots and the rating was made within the application interval. These results show that anthracnose control provided by PCNB was numerically superior to that provided by chlorothalonil (7 trials; 21 data points), tebuconazole (15 trials; 45 data points), mefenftrifluconazole (5 trials; 15 data points), penthiopyrad (24 trials; 72 data points), pyraclostrobin (7 trials; 21 data points), fludioxonil (9 trials; 27 data points), polyoxin D (3 trials; 9 data points) and fosetyl-Al (8 trials; 24 data points).

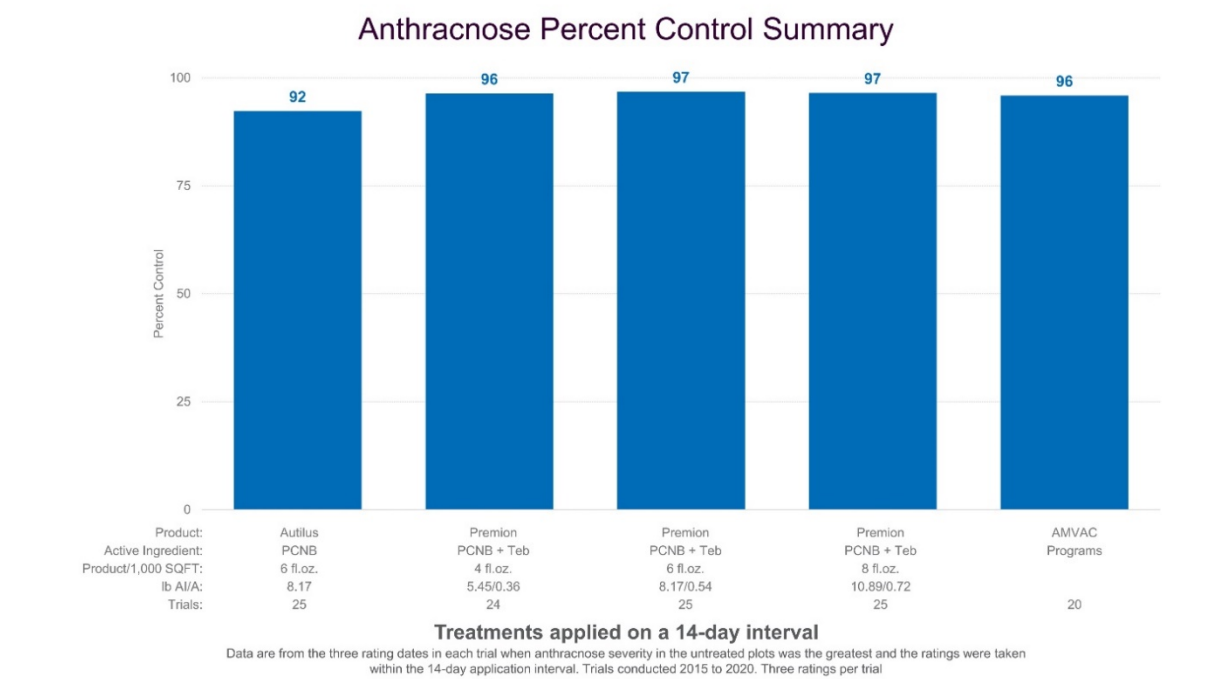
Figure 3



Resistance management for Anthracnose

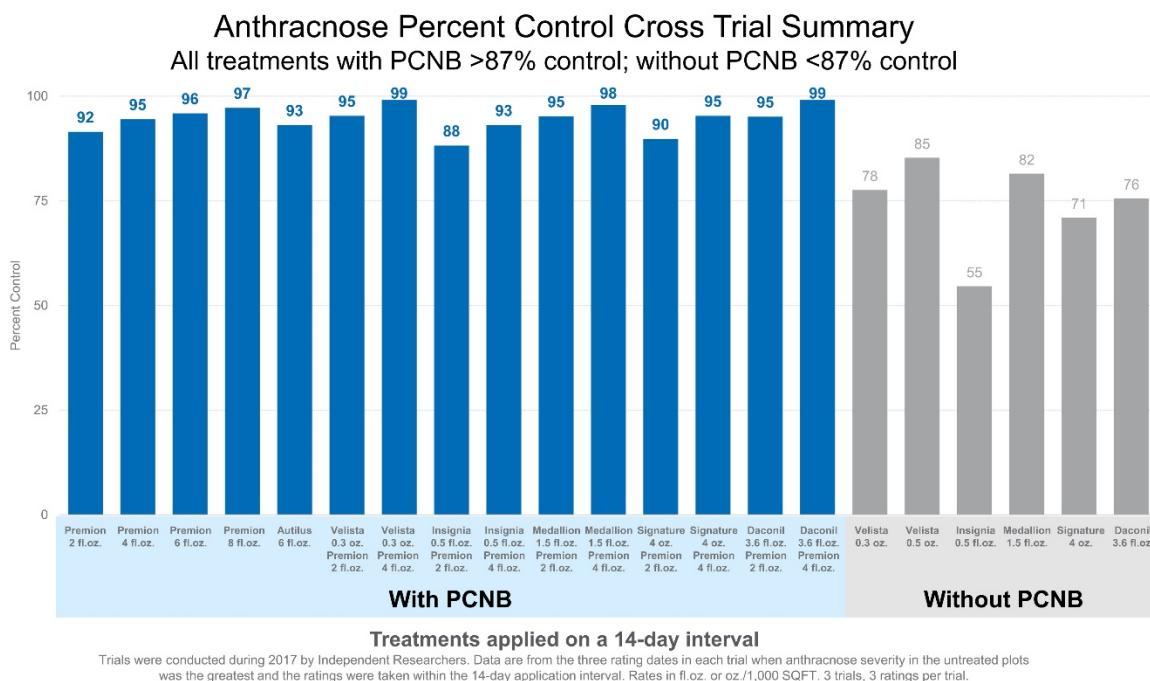
Rutgers University's Best Management Practices for Anthracnose Control (Anonymous, 2015) recommend using mixtures of fungicides with different modes of action to enhance efficacy and reduce the potential for the development of resistant strains of anthracnose. On this basis, AMVAC developed Premion fungicide, which is a pre-mix formulation containing PCNB and tebuconazole and which was registered in 2015. Figure 4 shows the extremely high levels of anthracnose control provided by Premion.

Figure 4



Premion may also be tank-mixed at very low application rates with other fungicides to enhance anthracnose control (Figure 5). Again, it is interesting to note that every treatment that included PCNB provided greater than 87 percent control and the treatments that did not contain PCNB did not achieve 87 percent control. The results with Velista are particularly interesting. The low application rate of Velista (0.3 oz. per 1,000 square feet) averaged 77.6 percent control. Increasing the Velista rate to the maximum application rate of 0.5 oz. per 1,000 square feet increased anthracnose control, but only to 85.3 percent. A much more effective option is to combine the low rate of Velista with one of the (extremely) low application rates of PCNB. Velista applied at 0.3 oz. plus Premion at 2 fl.oz. per 1,000 square feet provided 95.3 percent control while Velista applied at 0.3 oz. plus Premion at 4 fl.oz. per 1,000 square feet provided 99.1 percent control. The combinations of the low rate of Velista plus Premion also have an economic advantage over the high application rate of Velista.

Figure 5



PCNB for Snow Mold Control:

Since 2012 AMVAC has been supporting research that widely demonstrates to the marketplace the outstanding performance of PCNB as a snow mold fungicide. For a frame of reference, that same year EPA BEAD's (USEPA 2012) assessment of the benefits of PCNB included a Table showing non-PCNB alternatives for snow mold control. Under the heading of "Supreme" it listed four treatments: 1) Instrata (chlorothalonil, propiconazole, and fludioxonil) at 7 to 9 fl.oz. per 1,000 square feet; 2) two applications of Instrata (chlorothalonil, propiconazole, and fludioxonil) at 5.5 fl.oz. per; 3) Interface (iprodione and trifloxystrobin) at 4 to 6 fl.oz. per 1,000 square feet plus Banner Maxx (propiconazole) at 2 fl.oz. per 1,000 square feet; and 4) Interface (iprodione and trifloxystrobin) at 4 fl.oz. per 1,000 square feet plus Triton (triticonazole) at 0.85 fl.oz. per 1,000 square feet.

Subsequent to the 2012 BEAD assessment, the registrants promoting these treatments changed them to the following: 1) Instrata (chlorothalonil, propiconazole, and fludioxonil) at 7 to 11 fl.oz. per 1,000 square feet; and 2) Interface (iprodione and trifloxystrobin) at 6 fl.oz. per 1,000 square feet plus Mirage (tebuconazole) at 2 fl.oz. per 1,000 square feet. AMVAC has been tracking the performance of these "Supreme" treatments and a performance profile for them is shown in Table 4. It is important to note that none of these "Supreme" treatments achieved an average disease control rating of 90 percent or greater.

Table 4 Control from ‘Supreme’ Treatment Programs (as evolved after BEAD 2012)

Product	Product/ 1,000 Square Feet	Active Ingredient(s)	lb AI/A	Number of Years	Number of Trials	Average Percent Control
Instrata	7 fl.oz.	chlorothalonil	7.15	7	17	81.2
		propiconazole	1.12			
		fludioxonil	0.288			
Instrata	9 fl.oz.	chlorothalonil	9.19	7	14	85.3
		propiconazole	1.44			
		fludioxonil	0.37			
Instrata	11 fl.oz.	chlorothalonil	11.23	6	13	87.6
		propiconazole	1.76			
		fludioxonil	0.453			
Interface	6 fl.oz.	iprodione	4.37	5	17	84.9
		trifloxystrobin	0.266			
Mirage	2 fl.oz.	tebuconazole	1.36			
All trials had a minimum of 25 percent snow mold in untreated plots						

As stated previously, AMVAC has been working diligently to highlight the value of PCNB as a snow mold fungicide by using low application rates in combination with other fungicide active ingredients to provide consistently unsurpassed snow mold control. A handful of these treatments are shown in Table 5. It is important to note that all of these treatments average well in excess of 90 percent control and eclipse the performance of treatments designated as ‘Supreme’ in 2012. At the current time, all snow mold treatments that that qualify as “Ultra” performance have one thing in common - they all incorporate PCNB. That is a very powerful statement regarding the benefit of PCNB to turfgrass managers.

Table 5 Control from Sample Treatment Programs Containing PCNB

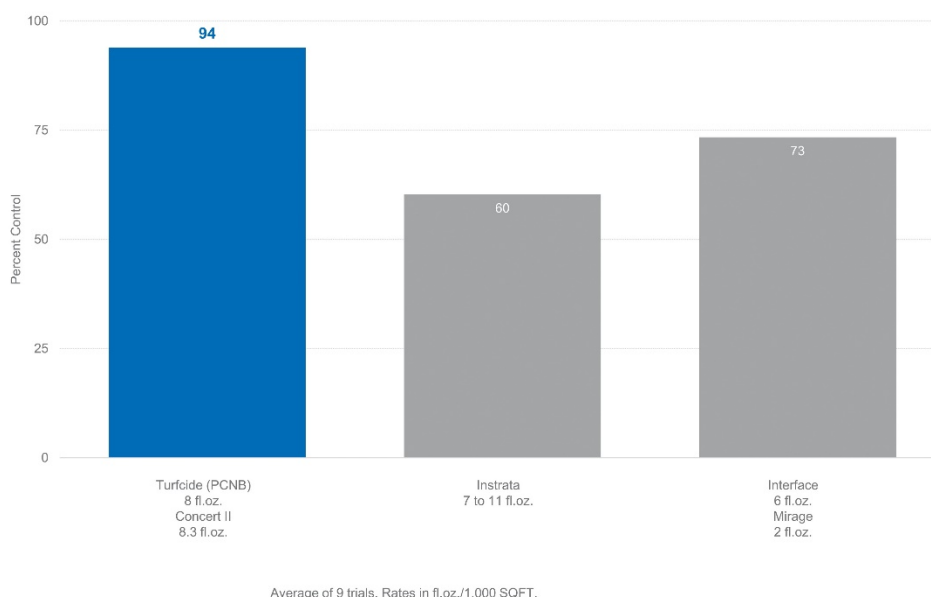
Product	Product/ 1,000 Square Feet	Active Ingredient(s)	lb AI/A	Number of Years	Number of Trials	Average Percent Control
Turfide	8 fl.oz.	PCNB	10.89	9	36	96.3
Concert II	8.3 fl.oz.	chlorothalonil	11.57			
		propiconazole	0.87			
Premion	10 fl.oz.	PCNB	13.61	4	17	95.7
		tebuconazole	0.9			
Previa	5.5 fl.oz.	chlorothalonil	11.23			
Premion	10 fl.oz.	PCNB	13.61			
		tebuconazole	0.9			
Secure	0.5 fl.oz.	fluazinam	0.7	6	23	94.2
Premion	10 fl.oz.	PCNB	13.61			
		tebuconazole	0.9			
Previa	4 fl.oz.	chlorothalonil	8.17	6	20	93.6
Turfide	8 fl.oz.	PCNB	10.89			
Concert II	5.5 fl.oz.	chlorothalonil	7.49			
		propiconazole	0.56			
All trials had a minimum of 50 percent snow mold in untreated plots						

PCNB Stands Out from Alternatives in Challenging Conditions:

Not all snow mold trials are alike in terms of the challenge they present to fungicide applications. There are a number of environmental conditions that have a negative impact on fungicide performance against snow mold and most of these are not fully understood. It is known that PCNB is the most effective active ingredient in being able to maintain control under the most challenging of conditions. It has been said that “as conditions become more challenging, PCNB becomes more valuable.” This is supported by the following example from our AMVAC snow mold database. Figure 6 shows the results from 3 treatments that were evaluated under challenging conditions in 9 field trials. Challenging conditions were defined as: 1) a minimum of 25 percent snow mold in untreated plots; and 2) Instrata applied at a label rate for snow mold did not provide at least 90 percent control. Neither of the “Supreme” treatments provided acceptable snow mold control while the inclusion of PCNB in a treatment program provided consistently high levels of control even under challenging conditions.

Figure 6

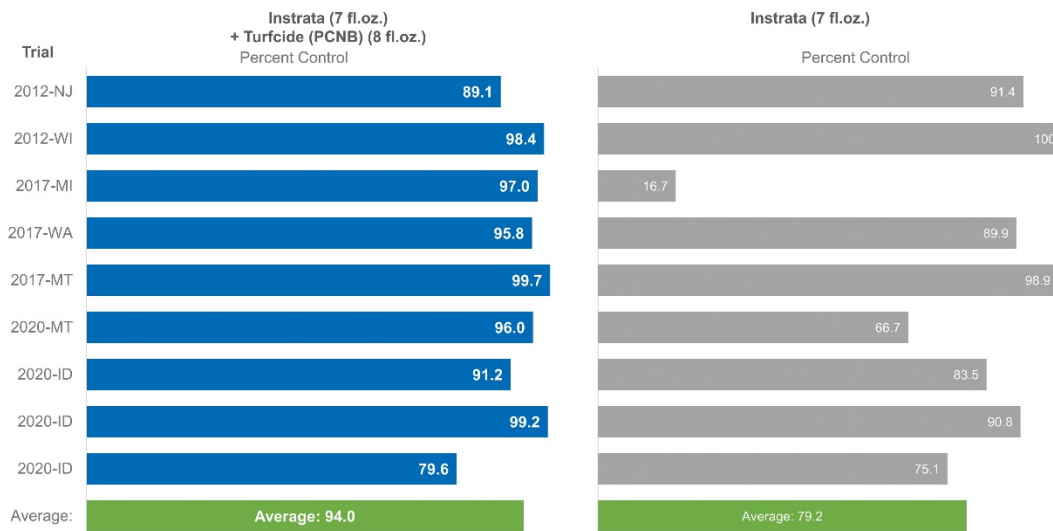
Snow Mold Percent Control Under Challenging Conditions Summary



PCNB also provides benefits when added to snow mold programs that are being promoted by other registrants. Figures 7-10 show the impact of adding PCNB to treatments that feature products from Syngenta, Bayer and BASF. The addition of PCNB to these treatments increased control by an average of 17.7 percent and all the PCNB treatments averaged greater than 94 percent control. This is significant to users who need to protect their golf courses as the main assets of their business.

Figure 7

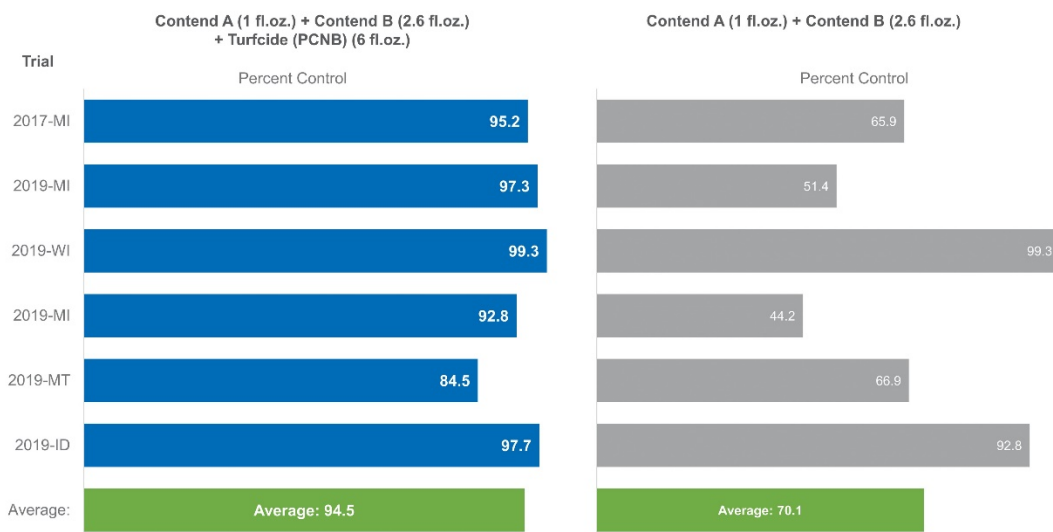
Snow Mold Percent Control Summary Adding Turfcide (PCNB) to Instrata provides better control



Rates in fl.oz./1,000 SQFT. n=9

Figure 8

Snow Mold Percent Control Summary Adding Turfcide (PCNB) to Contend A + Contend B provides better control



Rates in fl.oz./1,000 SQFT. n=6

Figure 9

Snow Mold Percent Control Summary

Adding Turfcide (PCNB) to Interface + Mirage provides better control

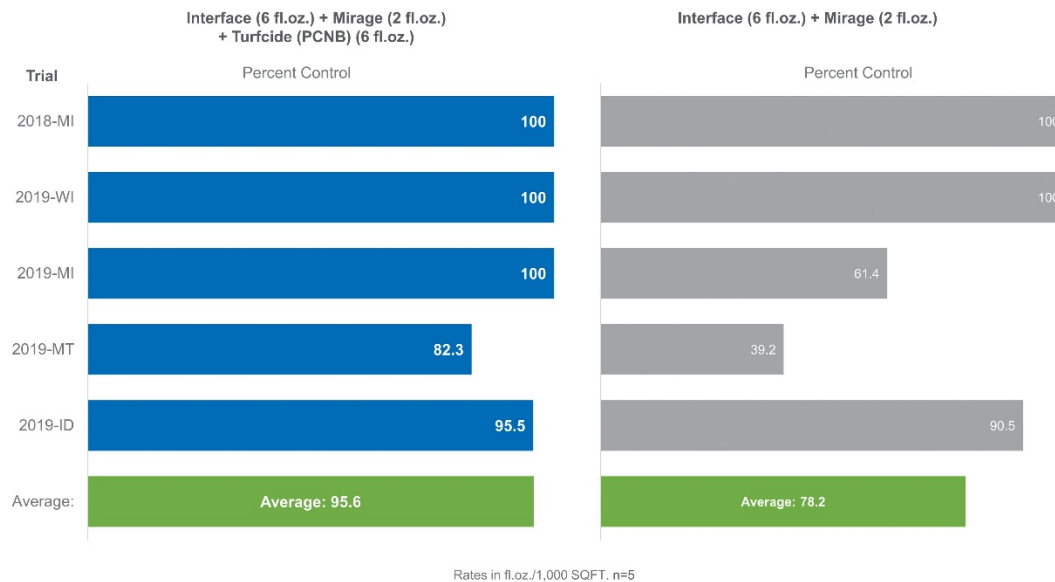
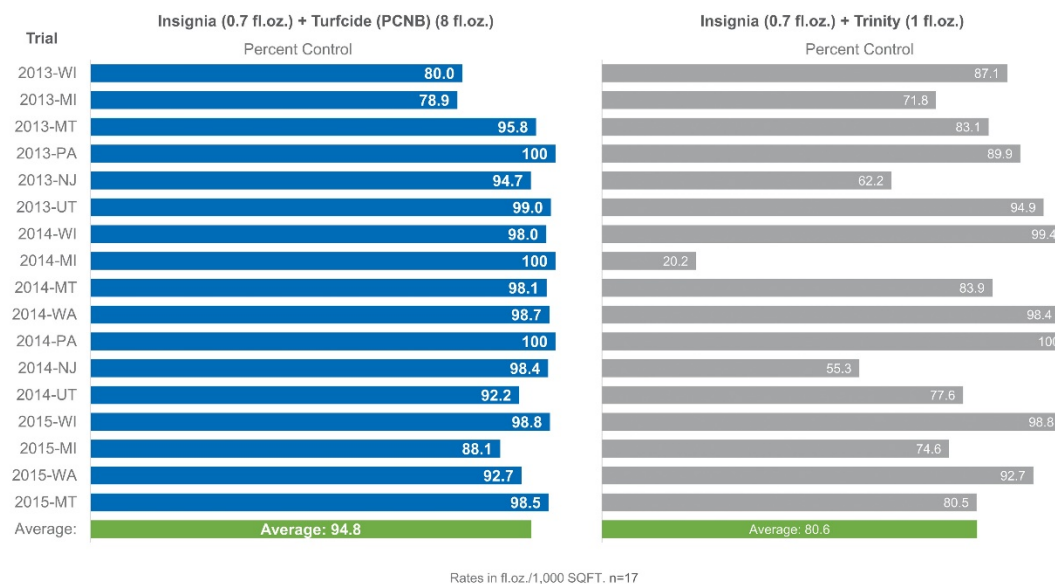


Figure 10

Snow Mold Percent Control Summary

Insignia + Turfcide (PCNB) provides better control than Insignia + Trinity

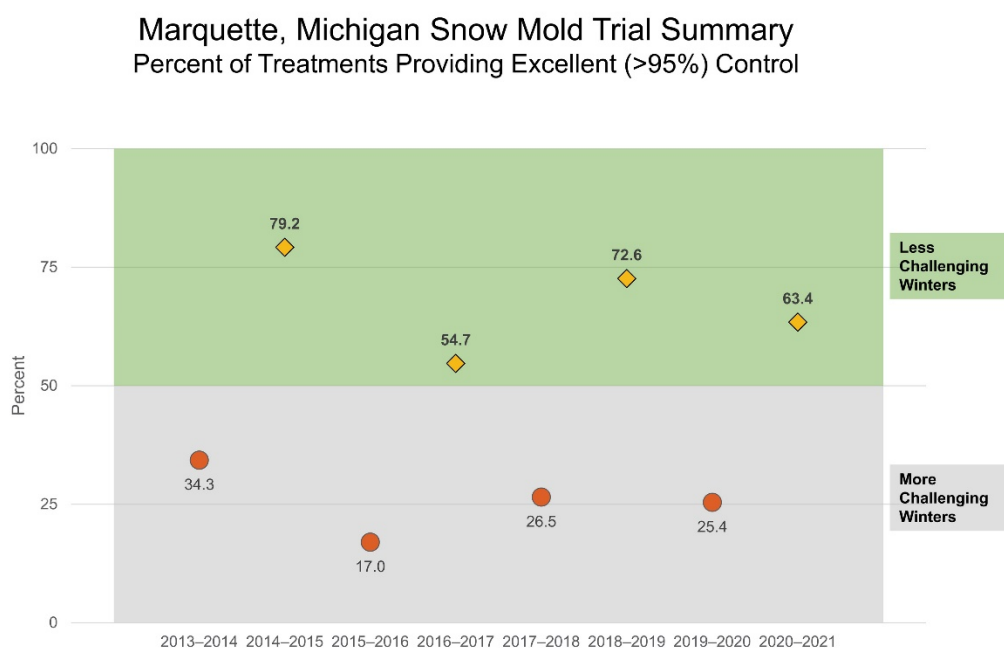


It is important to note that many of the above treatments were not placed in the trials by AMVAC. Rather, the other registrants have used third-party researchers to evaluate their products with PCNB. In fact, BASF alone has evaluated at least 18 treatments with their products and PCNB over the past 10 years. Obviously, other registrants also see the benefits of PCNB for snow mold control.

Anyone in the turf industry who is involved with snow mold control has an awareness of field trials conducted in Marquette, MI by Dr. Paul Koch of the University of Wisconsin. Dr. Koch has been conducting snow mold research at this site for many years and it is renowned for long durations of snow cover, and, in many years, conditions evolve after applications are made that challenge the snow mold treatments. Information from the trials that Dr. Koch conducted at this site since 2013 is presented in Figures 11-13.

Figure 11 will be useful when reviewing the subsequent data showing the performance of individual treatments at controlling snow mold at this site. The data points show the percentage of treatments that provided excellent control (at least 95 percent control) during the eight-year period. The green/gray shading can be viewed as separating the less challenging years (green shading) from the more challenging years (gray shading). Interestingly, in alternating years, the site varied from more challenging to less challenging over the eight-year period.

Figure 11



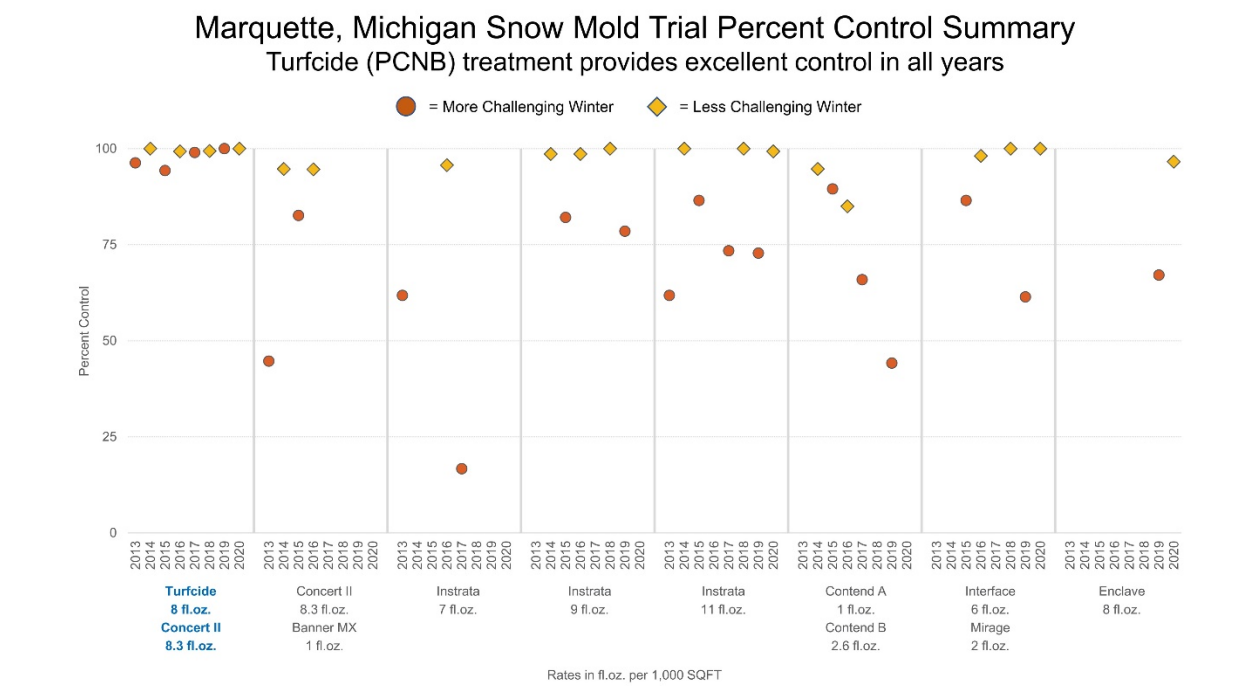
Snow mold performance data for selected treatments in the years shown in Figure 11 are presented in Figure 12. AMVAC's premier snow mold treatment of Turfcide 400 at 8 fl.oz. plus Concert II at 8.3 fl.oz. per 1,000 square feet provided outstanding control across all 8 years. This treatment provided at least 94 percent control in each year, it averaged 98.3 percent control and in six of the eight years it provided at least 99 percent control. That is remarkable control considering the trials were conducted at the most challenging snow mold site in the country.

Data from a series of treatments/programs that have been promoted recently by Syngenta appear next. The first is Concert II at 8.3 fl.oz. plus Banner Maxx at 1 fl.oz. per 1,000 square feet. In trials that were conducted under less challenging conditions (2014 and 2016), this treatment performed well. However, in trials that were conducted under more challenging conditions (2013

and 2015), this treatment did not provide acceptable control. Data from three application rates of Instrata appear next. The 7 fl.oz. per 1,000 square feet treatment performed well under less challenging conditions (2016) but performed poorly under more challenging conditions (2013 and 2017). The same trend is seen for Instrata at 9 fl.oz. and 11 fl.oz. per 1,000 square feet – applications made during the less challenging years (2014, 2016, 2018 and 2020) performed well while applications made during the more challenging years (2013, 2015, 2017 and 2019) performed poorly. The combination of Contend A at 1 fl.oz. plus Contend B at 2.6 fl.oz. per 1,000 square feet provided greater than 90 percent control only one time – in 2014, which was a less challenging year. It performed very poorly in the challenging years of 2017 and 2019.

The final two treatments are from Bayer and Control Solutions. The data follows the same trend as above. The treatments perform well in less challenging years (2016, 2018 and 2020), but do not provide acceptable control in more challenging years (2015 and 2019).

Figure 12

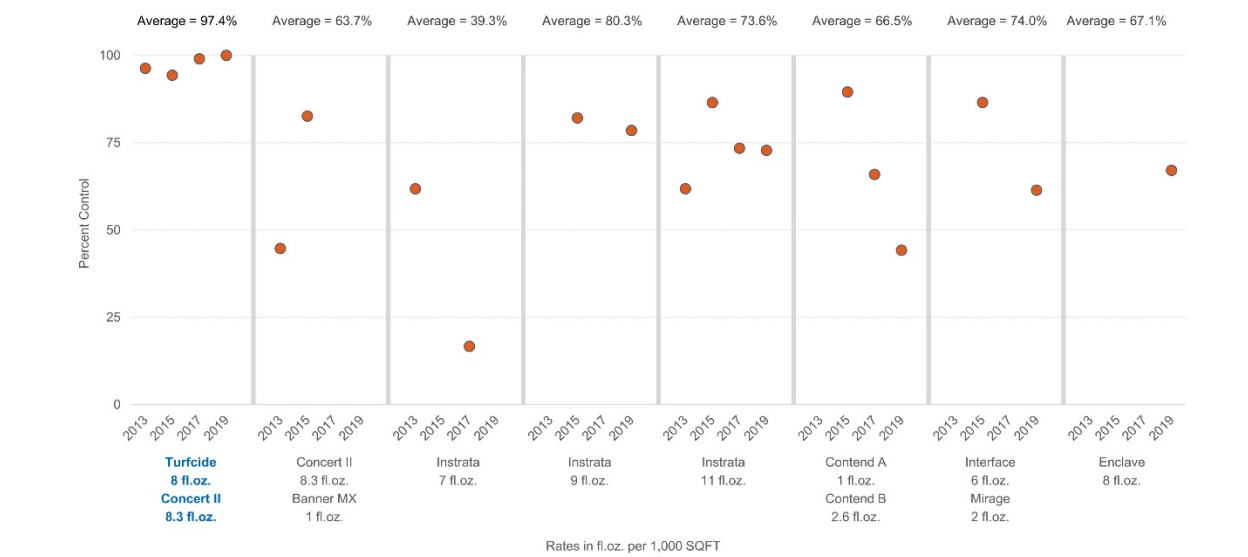


To bring sharply into focus the benefits that PCNB brings to turfgrass managers, Figure 13 presents data from the most challenging site in the country (Marquette, MI) during recent years when control was most challenging (2013, 2015, 2017 and 2019). In these four years, AMVAC's premiere snow mold treatment of Turficide 400 at 8 fl.oz. plus Concert II at 8.3 fl.oz. per 1,000 square feet provided outstanding control across all 4 years. This treatment provided at least 94 percent control in each year, it averaged 97.4 percent control and in two of the four years it provided at least 99 percent control. Again, this is a remarkable performance considering the trials were conducted at the most challenging snow mold site in the country. None of the other treatments were able to provide at least 90 percent control at any time. Dr. Koch has been quoted telling golf course superintendents to "prepare for the worst" when selecting a snow mold treatment. It is obvious that this cannot be done without including PCNB in their treatment. In

addition, BASF, Syngenta, Bayer, Control Solutions, and others are in possession of much of these data.

Figure 13

Marquette, Michigan Snow Mold Trial Percent Control Summary Turficide (PCNB) treatment provides excellent control in all Challenging years



Justification for the reregistration of PCNB in ornamental disease management

Ornamental plants include hundreds of species and several hundred varieties of bedding plants, potted flowering plants, foliage plants, cut flowers, foliage plants, perennial flowering plants, shrubs, palms and trees. This large variety of plants are grown in a variety of production systems, nurseries, farms and greenhouses where they are subject to many challenges including pests and diseases that often cause significant economic damage or complete crop loss. To manage these pests, ornamental- growers rely on multiple tools including fungicides that prevent or minimize damage by common and frequent plant pathogens.

One such pathogen, *Rhizoctonia* spp. causes several difficulties to control diseases during one or more stages of development of most ornamental plants grown in greenhouses, nurseries, and landscapes. *Rhizoctonia* diseases include damping-off (before or after seedling emergence) on crops grown from seed, stem rots on cutting and mature plants, and foliage and web blights in propagation and in woody ornamentals. The pathogen can quickly colonize organic matter and survives as sclerotia and mycelium in plant residues. Fungicides are essential in management of *Rhizoctonia* management but there is only a limited number of active ingredients that are available to small and large growers and are consistently effective in a variety of growing systems and conditions.

Fungicides like PCNB are critical to the US high value bulb industry for the production of crops such as tulip, lily, and iris. PCNB is still used to control gray bulb rot and crown rot both in greenhouses where bulbs are grown for cut flower production and in the field where plants are grown for both bulb and flower production. In both, PCNB use is viewed as critical.

Because of how PCNB is used, it is critically important to the bulb industry because rot diseases are prevalent through the 6-month grow cycle and inoculum levels continue to build in the soil. This long disease risk period indicates the need for several fungicide options with residual activity and with different modes of action to manage the disease epidemics and reduce the risk of fungicide resistance development.

In field-grown bulbous iris and tulip bulb production PCNB is used to control both crown rot and gray bulb rot as an in-furrow application. The PCNB use rate depends upon the inoculum level present in the soil. In cut flower production, PCNB is used where bulbous iris and lily bulbs are planted directly in soil. PCNB is applied as a spray, rototilled into the soil, and watered in. PCNB is also essential in Easter lily production; bulbs are treated (dipped) to control diseases because of its long residual activity and the different mode of action it represents. Field grown bulbs may be in the ground for more than a year and multiple fungicides with different modes of action are needed for disease management. Easter lilies are three-year crops, and the bulbs are dug, dipped, and replanted each year. The bulbs are dipped in a solution of PCNB and are soaked before being replanted. Containers with newly planted bulbs are also drenched with PCNB. The crop duration, the prevalence of the pathogens and PCNB use flexibility are essential in keeping the US bulb industry viable.

All the disease resistance management strategies and best practices apply equally to PCNB use in ornamental disease management.

Concluding Statements

The reregistration and continued availability of PCNB is critical to the implementation of IPM programs for diseases on application sites and crops listed above. This is especially important for minor crops and niche use patterns such as Cole crops and ornamental bulb dips respectively that do not have very many products registered for them. Preservation of the chemical tools growers have available to them is critically important.

EPA in their own 2015 assessment state 'PCNB has commonly been used as a tank-mix partner to other fungicides since it has an apparent broad mechanism of action that results in a low pathogen-resistance concern.' This is not a trivial characteristic-a fungicide such as PCNB with no documented evidence of resistance and a low likelihood of developing resistance is a rare and valuable tool for growers and applicators and its continued registration is in the public interest.

Additionally, its use as a foundation fungicide for soil-borne disease control programs allows farmers to get better performance from applications of other fungicides and preserves the usefulness of all those fungicides within a resistance management program. A foundation fungicide is a broad-spectrum product, such as PCNB, which offers protection from infections by

preventing infections into susceptible plants. Then, higher-risk single-site fungicides are integrated into the disease management program. This approach extends the longevity of the single-site fungicides by minimizing resistance development, since any resistant pathogens are controlled by foundation products. PCNB's unique mode of action is an essential part of an integrated pest management program to reduce the probability of resistance and preserve as many chemical tools as possible.

Variable (tank) mixtures or sequential seasonally applied multi-chemical treatment programs are tools of choice for turf disease management particularly in high value golf course management. They form the foundation of best management practice where AIs don't compete head-to-head as alternatives but are viewed as valuable constituents to be utilized together to meet and overcome the environmental challenges presented and disease pressures anticipated in any given year. PCNB has been shown to play a very significant role in these treatments with program performance boosted by its presence time after time.

EPA acknowledge in their 2015 BEAD assessment 'the extensive use of PCNB in the past was due to its efficacy and inexpensive cost. In recent years several fungicides are registered that are effective and have competed for market share of PCNB'. PCNB was unavailable to growers and applicators from ca. 2010-2013 due to an EPA Stopped Sale Order and it could be stated that PCNB has gone through the ultimate 'market value' test. Despite that market disruption PCNB again competes for market share against these newer fungicides, building on its reputation for consistent high performance against tough soil borne pathogens and bringing control of new diseases in challenging conditions for golf course management to the marketplace.

From protection against common scab in potatoes to anthracnose prevention in turfgrass, PCNB is proven chemistry that can also expand to take on new challenges. In the case of snow mold control, it's been said best that "as conditions become more challenging, PCNB becomes more valuable." In the equally challenging fight against fungal pathogen resistance, PCNB, with its unique and complex mode of action, becomes more valuable with low risk of suffering such fate.

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US EPA 2012 BEAD Assessment of the Benefits of PCNB and Alternative Fungicides for Use on Cole Crops, Golf Course Turfgrass, and Ornamental Bulbs (DP#291297, DP#291298, DP#291299) Yourman L.

US EPA 2015 BEAD Chemical Profile (BCP) for registration review of PCNB (Pentachloronitrobenzene), Chemical code 056502 Yourman L.

Appendix A
Product Specimen Labels Follow This Page

BLOCKER® 4F

FLOWABLE AGRICULTURAL CROP FUNGICIDE

ACTIVE INGREDIENT:
(% by weight)

Pentachloronitrobenzene (PCNB) 40.0%

INERT INGREDIENTS: 60.0%

TOTAL: 100.0%

Contains 4 lbs. of Pentachloronitrobenzene per U.S. gallon

Contains petroleum distillates, xylene or xylene range aromatic solvents

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.)

FIRST AID	
If in eyes:	<ul style="list-style-type: none"> 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 center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If Inhaled:	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, and give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
If swallowed:	<ul style="list-style-type: none"> Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
EMERGENCY INFORMATION	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY: For Medical Emergencies phone:.....1-888-681-4261 For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC®1-800-424-9300 For Product Use Information phone : AMVAC®1-888-462-6822	
NOTE TO PHYSICIAN	
Contains petroleum distillate. Vomiting may cause aspiration pneumonia.	

SEE SIDE/BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

EPA Reg. No. 5481-8992
EPA Est. No. _____

Net Contents: _____ Gallons.



AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200,
Newport Beach, CA 92660 USA

Made in USA

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye irritation. Harmful if absorbed through the skin or inhaled. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category E on an EPA chemical resistance category selection chart.

Applicators and other handlers (other than mixers and loaders) must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, or nitrile rubber, or neoprene rubber or Viton®
- Shoes plus socks

Mixers and Loaders Must Wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, or nitrile rubber, or neoprene rubber or Viton
- Shoes plus socks
- For exposures in enclosed areas: A respirator with an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P, or HE prefilter.
- For exposure outdoors: Dust/Mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P or HE filter.

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

User Safety Requirements

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, 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.
- 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 fish and aquatic organisms. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites. 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 when disposing of equipment wash waters.

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 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 intervals. 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.

Exception: if the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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
- Chemical-resistant gloves such as barrier laminate or nitrile rubber, or neoprene rubber, or Viton
- Shoes plus socks

PRODUCT INFORMATION

Blocker 4F is a preventive fungicide labeled for control of certain soil borne diseases agricultural crops. Best results are achieved when used in a preventive program. Follow specified rates and application directions. Carefully read, understand and follow label directions.

Resistance Management

For resistance management, Blocker 4F contains PCNB, a Group 14 fungicide. Any fungal population may contain individuals naturally resistant to Blocker 4F and other Group 14 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same location. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of Blocker 4F or other Group 14 fungicides with different groups that control the same pathogens.

- Use tank mixtures with fungicides from a different group that are 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 (agricultural uses), 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 pest control advisor for any additional pesticide resistance-management and/or IPM recommendations for specific pathogens.

For further information or to report suspected resistance contact AMVAC at (1-888-462-6822). You can also contact your pesticide distributor or university extension specialist to report resistance.

Product Restrictions

- Do not apply this product by air.
- Chemigation or pesticide applications through irrigation systems are only permitted for foliar potato applications. Do not apply this product to any other crops through any type of irrigation systems.
- Do not graze treated areas or feed clippings to livestock.
- For Cole Crop applications, Mixers and Loaders cannot handle more than 150 gallons product per day (equivalent to 600 lbs. A.I. /day). Applicators cannot apply more than 337 gallons of product per day (1,350 lbs. A.I. /day)
- For Chemigation applications to potatoes, Mixers and Loaders cannot handle more than 150 gallons of product per day (equivalent to 600 lbs. A.I. /day).
- Do not plant root crops in PCNB treated fields within 12 months of the last application of PCNB unless PCNB is registered for use on those crops.
- Use of any hand-held application equipment is prohibited except for greenhouse use.
- Apply by ground boom application only except for greenhouse use.

COMPATIBILITY

For broad spectrum disease control, this product can be tank mixed with compatible products. Follow more restrictive labeling or precautions on the label of any tank mix product. Do not exceed dosage rates on any label. This product cannot be mixed with any product containing a label prohibition against such mixing. Do not tank mix with other chemicals unless prior use has proven compatibility.

AGRICULTURAL CROPS

USE AND RATE REQUIREMENTS FOR VEGETABLES AND VEGETABLE SEEDLINGS

CROP	DISEASE	QTY PRODUCT PER ACRE	FL. OZ. PRODUCT PER 1,000 FT. OF ROW	APPLICATION DIRECTIONS
Broccoli*, Brussels Sprouts*, Cabbage*, Chinese Broccoli*, Cauliflower*, Chinese Cabbage* (tight-headed varieties only), Collards*, Kale*, Mustard Greens*	Clubroot (<i>Plasmodiophora brassicae</i>)	3 pints	n/a	TRANSPLANT SOLUTION: Mix 3 pints in 100 gals of water. Use 0.5 to 0.75 pint of solution per plant. Base the specific dosage on the severity of the disease infection. Maintain agitation to hold product in suspension. Thoroughly incorporate solution into the soil. Do not exceed 22.5 lbs. of A.I. /A in any one

CROP	DISEASE	QTY PRODUCT PER ACRE	FL. OZ. PRODUCT PER 1,000 FT. OF ROW	APPLICATION DIRECTIONS
				season.
		5.62 gallons	55	BAND APPLICATION: Apply in 25 gals of water per acre or 5.5 fl. oz. per 100 ft. of row based on 40 inch row spacing. Spray as a 12-inch band centered on row and incorporate to a depth of 4 to 6 inches immediately prior to planting. May be used on direct seeded cole crops. Thoroughly incorporate solution into the soil. Do not exceed 22.5 lbs. of A.I. /A in any one season.
		5.62 gallons	n/a	BROADCAST APPLICATION: Apply in 30 gallons of water as a pre-plant broadcast spray prior to planting. Thoroughly incorporate to a depth of 4 to 6 inches using a disc or other suitable equipment. Thoroughly incorporate solution into the soil. Do not exceed 22.5 lbs. of A.I. /A in any one season.
	Wire Stem or Black Rot (<i>Corticium solani</i>)	2.8 to 3.75 gallons	n/a	BROADCAST DRENCH APPLICATION: Apply in 50 gallons of water per acre as a soil drench at the time of or immediately after seeding. Do not exceed 22.5 lbs. of A.I. /A in any one season.
		1.9 to 2.8 gallons	18 to 27	ROW DRENCH TREATMENTS: Apply in 35 gals of water per acre based on 40-inch row spacing. Spray as an 8-inch band centered on the row at time of or immediately after seeding. Do not exceed 22.5 lbs. of A.I. /A in any one season.
Potatoes**	Stem Canker/Black Scurf (<i>Rhizoctonia solani</i>)	5 to 10 pints	5.2 to 10.4	BAND APPLICATION: Apply in 10 to 20 gallons of water per acre based on 34-inch row spacing. Spray an 8½-inch band in seed furrow at time of planting. Direct spray into furrow over the seed and cover as a part of the hilling operation during planting. Do not exceed 5 lbs. of A.I. /A in any one season.
	White Mold (<i>Sclerotinia sclerotiorum</i>)	3 to 5 pints (1 pint of		CHEMIGATION APPLICATION: For disease suppression, apply Blocker 4F at the first sign of disease or no later than just

CROP	DISEASE	QTY PRODUCT PER ACRE	FL. OZ. PRODUCT PER 1,000 FT. OF ROW	APPLICATION DIRECTIONS
	Black Dot (Colletotrichum coccodes)	Blocker 4F = 0.5 pounds PCNB)		<p>prior to or after row closure through sprinkler irrigation equipment in 0.1 to 0.3 inches of water. If disease persists, a second foliar application may be made 10 days or more after the first application and no later than 28 days before harvest. Thorough coverage of the foliage is essential.</p> <p>RESTRICTIONS:</p> <ul style="list-style-type: none"> • Apply by chemigation equipment only. • For use in Idaho, Nevada, Washington and Oregon only. • Do not apply within 28 days of harvest. • Do not make chemigation applications of Blocker 4F if Blocker 4F or other PCNB products were applied as a band application in furrow at planting. • Do not exceed a total of 10 pints of Blocker 4F (5 lbs. PCNB) per acre per year when applied 28 or more days before harvest. • Do not make more than 2 foliar applications. <p>TANK MIXES</p> <ul style="list-style-type: none"> • Tank mix Blocker 4F with other fungicides registered for use on potatoes to enhance and/or extend control of white mold and black dot. Apply 3 to 5 pints of Blocker 4F per application per acre through chemigation systems in combination (tank-mixed) with any other compatible product. <p>SEE CALIBRATION AND APPLICATION TECHNIQUES IN CHEMIGATION SECTION.</p>

*For Cole Crop applications, Mixers and Loaders cannot handle more than 150 gallons product per day (equivalent to 600 lbs. A.I. /day). Applicators cannot apply more than 337 gallons of product per day (1,350 lbs. A.I. /day). Use on collards, kale and mustard greens restricted to the State of Georgia.

** For Chemigation applications to potatoes, Mixers and Loaders cannot handle more than 150 gallons of product per day (equivalent to 600 lbs. A.I. /day).

CHEMIGATION

APPLICATION THROUGH SPRINKLER IRRIGATION EQUIPMENT

In addition to the use rates and directions specified above, the following restrictions must be observed when using this product in any type of irrigations system:

For Potatoes, apply Blocker 4F only through overhead sprinklers, including center pivot, solid set or portable (wheel move) irrigation systems.

Do not apply this product through any other type of irrigation system. Crop injury or lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system, (including greenhouse systems), used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The system must contain a functional check valve, vacuum relief valve, and a low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur. Do not apply when wind speed favors drift beyond the area intended for treatment.

SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year.

Chemigation systems connected to public water systems must contain a functional, reduced pressure zone (RPZ), backflow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water systems should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where the pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

CALIBRATION AND APPLICATION TECHNIQUES FOR POTATOES

Center Pivot Irrigation Equipment: Operate system and injection equipment at normal pressures recommended by the manufacturer of injection equipment used. Fill tank of injection equipment with water. Operate system for one complete cycle, measuring the time required, amount of water injected and acreage contained in cycle. Mix specified amount of Blocker 4F for acreage to be covered into the same amount of water used during calibration and inject into system continuously for one revolution. Shut off injection equipment after one revolution, but continue to operate irrigation system until Blocker 4F has been cleared from the last sprinkler head.

Solid-Set and Portable (Wheel Move) Irrigation Equipment - Determine acreage covered by sprinkler. Fill tank of injection equipment with water and adjust flow to use contents over 10-30 minute period. Mix desired amount of Blocker 4F for acreage to be covered into quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. Inject Blocker 4F at the end of the irrigation cycle or as a separate application. Stop injection equipment after treatment is complete and continue to operate irrigation system until Blocker 4F has been cleared from the last sprinkler head.

Do not run irrigation system without safety valves or other devices to prevent back siphoning of Blocker 4F into water source. Maintain Irrigation water treated with Blocker 4F on the treated area until the water is absorbed into the soil. Connect the tank containing Blocker 4F to the suction side of the irrigation pump or other pressurized equipment attached to the irrigation line. Maintain agitation of the diluted Blocker 4F in the chemical source (or slurry) tank during the entire application period.

IMPORTANT INFORMATION

To protect endangered aquatic species, use one of the following options when applying Blocker 4F through sprinkler irrigation equipment:

1. Apply only when there is sustained wind away from fish-bearing waters, or
2. Leave a 50 foot untreated buffer between treatment area and fish-bearing waters.

To protect endangered aquatic species, use one of the following options when applying Blocker 4F through ground equipment:

1. Apply only when there is sustained wind away from fish-bearing waters,
2. Leave a 25 foot untreated buffer between treatment area and fish-bearing waters, or
3. Use low-pressure nozzles according to manufacturer's specifications that produce only coarse or very coarse droplets.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep container closed when not in use. In case of spill or leak on floor or paved surfaces, soak up with sand, earth or synthetic absorbent. Remove to chemical waste area.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. 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:

Non-refillable container: Do not reuse or refill this container.

For containers 5 gallons in size or smaller:

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 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.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For containers larger than 5 gallons:

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; and (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN TORT, CONTRACT, NEGLIGENCE, STRICT

LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW MANUFACTURER OR SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

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AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200,
Newport Beach, CA 92660 USA



AGRICULTURAL CROP FUNGICIDE

ACTIVE INGREDIENT:
(% by weight)

Pentachloronitrobenzene (PCNB)10.0%

INERT INGREDIENTS:90.0%

TOTAL:100.0%

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.)

FIRST AID	
If in eyes:	<ul style="list-style-type: none"> 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 center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.
If inhaled:	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then, give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
EMERGENCY INFORMATION	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY: For Medical Emergencies phone:1-888-681-4261 For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC®1-800-424-9300 For Product Use Information phone: AMVAC®1-888-462-6822	

SEE SIDE/BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

 EPA Reg. No. 5481-8988

Net Contents: _____ Lbs.

EPA Est. No. _____



AMVAC Chemical Corporation
 4695 MacArthur Court, Suite 1200,
 Newport Beach, CA 92660, USA

Made in USA

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed, inhaled or absorbed through skin. Avoid breathing dust. This material may cause skin irritation. Avoid contact with eyes, skin or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, 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.
- 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 clothes.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. Cover, collect, or incorporate spilled granules. Do not contaminate water when disposing of equipment washwaters. Do not apply directly adjacent to potable water supplies. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark.

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 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 intervals. 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.

Exception: if the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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
- Chemical-resistant gloves made of any waterproof materials
- Shoes plus socks

PRODUCT INFORMATION

Blocker 10G is a preventive fungicide labeled for control of certain soil borne diseases on agricultural crops. Best results are achieved when used in a preventive program. Follow specified rates and application directions. Carefully read, understand and follow label directions.

Resistance Management

For resistance management, Blocker 10G contains PCNB, a Group 14 fungicide. Any fungal population may contain individuals naturally resistant to Blocker 10G and other Group 14 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same location. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of Blocker 10G or other Group 14 fungicides with different groups that control the same pathogens.
- Use tank mixtures with fungicides from a different group that are 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 (agricultural uses), 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 pest control advisor for any additional pesticide resistance-management and/or IPM recommendations for specific pathogens.

For further information or to report suspected resistance contact AMVAC at (1-888-462-6822). You can also contact your pesticide distributor or university extension specialist to report resistance.

Product Restrictions

- Do not graze treated areas or feed clippings to livestock.
- Do not plant root crops in PCNB treated fields within 12 months of the last application of PCNB unless PCNB is registered for use on those crops.
- Use of any hand held application equipment is prohibited.
- Aerial application is prohibited.
- For broadcast and band applications, apply using tractor drawn equipment only.

AGRICULTURAL CROPS

USE AND RATE REQUIREMENTS FOR VEGETABLES

CROP	DISEASE	PRODUCT APPLICATION RATE	APPLICATION DIRECTIONS See Restrictions on Amount of Product that can be Handled per Day below table.
Cabbage*	Clubroot (<i>Plasmodiophora brassicae</i>)	5.15 lbs. per 1,000 linear feet of row	PRE-TRANSPLANTING BAND TREATMENT: Apply in a 12 to 15-inch band. Apply and roto-till the granules to a depth of 4 to 6 inches just before transplanting.
		225 lbs. per acre	BROADCAST TREATMENT: Apply to the soil surface prior to transplanting, then disc the granules into the soil 4 to 6 inches deep.

CROP	DISEASE	PRODUCT APPLICATION RATE	APPLICATION DIRECTIONS See Restrictions on Amount of Product that can be Handled per Day below table.
			Thorough mixing with the soil will give best disease control.
Cauliflower*	Clubroot (<i>Plasmodiophora brassicae</i>)	5.15 lbs. per 1,000 linear feet of row	PRE-TRANSPLANTING BAND TREATMENT: Apply in a 12 to 15-inch band. Apply and roto-till the granules to a depth of 4 to 6 inches just before transplanting.
		225 lbs. per acre	BROADCAST TREATMENT: Apply to the soil surface prior to transplanting, then disc the granules into the soil 4 to 6 inches deep. Thorough mixing with the soil will give best disease control.
	Wire Stem or Bottom Rot (<i>Rhizoctonia solani</i>)	3.4 lbs. per 1,000 linear feet of row	BAND TREATMENT: Apply in an 8-inch wide band centered on the row immediately before planting. Mix granules into soil before planting to a depth of 2 inches.
Brussels sprouts*	Clubroot (<i>Plasmodiophora brassicae</i>)	5.15 lbs. per 1,000 linear feet of row	PRE-TRANSPLANTING BAND TREATMENT: Apply in a 12 to 15-inch band. Apply and roto-till the granules to a depth of 4 to 6 inches just before transplanting.
		225 lbs. per acre	BROADCAST TREATMENT: Apply to the soil surface prior to transplanting, then disc the granules into the soil 4 to 6 inches deep. Thorough mixing with the soil will give best disease control.
Broccoli*	Clubroot (<i>Plasmodiophora brassicae</i>)	5.15 lbs. per 1,000 linear feet of row	PRE-TRANSPLANTING BAND TREATMENT: Apply in a 12 to 15-inch band. Apply and roto-till the granules to a depth of 4 to 6 inches just before transplanting.
		225 lbs. per acre	BROADCAST TREATMENT: Apply to the soil surface prior to transplanting, then disc the granules into the soil 4 to 6 inches deep. Thorough mixing with the soil will give best disease control.
Collards*, Kale*, Mustard greens*	Clubroot (<i>Plasmodiophora brassicae</i>)	5.15 lbs. per 1,000 linear feet of row	PRE-TRANSPLANTING BAND TREATMENT: Apply in a 12 to 15-inch band. Apply and roto-till the granules to a depth of 4 to 6 inches just before transplanting.
		225 lbs. per acre	BROADCAST TREATMENT: Apply to the soil surface prior to transplanting, then disc the granules into the soil 4 to 6 inches deep. Thorough mixing with the soil will give best

CROP	DISEASE	PRODUCT APPLICATION RATE	APPLICATION DIRECTIONS See Restrictions on Amount of Product that can be Handled per Day below table.
			disease control.
Potatoes**	Stem Canker and Black Scurf (<i>Rhizoctonia solani</i>)	1.65 lbs. per 1,000 linear feet of row	IN-FURROW BAND TREATMENT: Apply in a 8.5-inch band with 34" row spacing. Direct the product into the furrow over the seed and cover as part of the hilling operation during planting. It is best to apply when the soil is slightly moist. Do not harvest within 45 days of application.

*Applications on cole crops are limited to a maximum application rate of 22.5 lbs. A.I. /A per season. Use on collards, kale and mustard greens restricted to the State of Georgia.

**Not for use in California.

PLANT TOLERANCE:

Neither the manufacturer nor the seller has determined whether or not Blocker 10G can be used safely on plants not specified on this label. Prior to any large scale application on such plants, the user should determine the safety of Blocker 10G fungicide by testing a small number of the type of plants to be treated.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a dry location.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. 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 DISPOSAL: Paper Bags: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then dispose of bag in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Cardboard Canisters: (Commercial) Nonrefillable container. Do not reuse or refill this container. Completely empty canisters into application equipment. Then dispose of container in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; and (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY

RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN TORT, CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW MANUFACTURER OR SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

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AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200,
Newport Beach, CA 92660, USA

PENTACHLORONITROBENZENE

GROUP

14

FUNGICIDE

**FLOWABLE TURF FUNGICIDE**

ACTIVE INGREDIENT:	(% by weight)
Pentachloronitrobenzene (PCNB)	40.0%
INERT INGREDIENTS:	60.0%
TOTAL:	100.0%

Contains 4 lbs. of Pentachloronitrobenzene per U.S. gallon

Contains petroleum distillates, xylene or xylene range aromatic solvents

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.)

FIRST AID	
If in eyes:	<ul style="list-style-type: none"> • 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 center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If Inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, and give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
If swallowed:	<ul style="list-style-type: none"> • Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.
EMERGENCY INFORMATION	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:	
For Medical Emergencies phone:.....	1-888-681-4261
For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC®	1-800-424-9300
For Product Use Information phone: AMVAC®	1-888-462-6822
NOTE TO PHYSICIAN	
Contains petroleum distillate. Vomiting may cause aspiration pneumonia.	

SEE SIDE/BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

EPA Reg. No. 5481-8992

Net Contents: _____ Gallons.



AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200,
Newport Beach, CA 92660 USA

Made in USA

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye irritation. Harmful if absorbed through the skin or inhaled. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category E on an EPA chemical resistance category selection chart.

Applicators and other handlers (other than mixers and loaders) must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, or nitrile rubber, or neoprene rubber or Viton®
- Shoes plus socks

Mixers and Loaders Must Wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, or nitrile rubber, or neoprene rubber or Viton
- Shoes plus socks
- For exposures in enclosed areas: A respirator with an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P, or HE prefilter.
- For exposure outdoors: Dust/Mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P or HE filter.

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

User Safety Requirements

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, 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.
- 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 fish and aquatic organisms. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites. 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 when disposing of equipment wash waters.

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 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 intervals. 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.

Exception: if the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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
- Chemical-resistant gloves such as barrier laminate or nitrile rubber, or neoprene rubber, or Viton
- Shoes plus socks

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. Do not enter or allow others to enter treated areas until area has been irrigated and turf has dried.

PRODUCT INFORMATION

Turfcide 400 is a preventive fungicide labeled for control of certain soil borne diseases of non-residential turf (golf course tees, greens and fairways, sod farms, industrial parks, and professional and college athletic fields). Best results are achieved when used in a preventive program. Follow specified rates and application directions. Carefully read, understand and follow label directions.

Resistance Management

For resistance management, Turfcide 400 contains PCNB, a Group 14 fungicide. Any fungal population may contain individuals naturally resistant to Turfcide 400 and other Group 14 fungicides. A gradual or total loss of pest control

may occur over time if these fungicides are used repeatedly in the same location. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of Turfcide 400 or other Group 14 fungicides with different groups that control the same pathogens.
- Use tank mixtures with fungicides from a different group that are 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 (agricultural uses), 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 pest control advisor for any additional pesticide resistance-management and/or IPM recommendations for specific pathogens.

For further information or to report suspected resistance contact AMVAC at (1-888-462-6822). You can also contact your pesticide distributor or university extension specialist to report resistance.

Product Restrictions

- Use of Turfcide 400 is prohibited on
 - golf course roughs;
 - residential sites including lawns, yards, and ornamental plants and gardens around homes and apartments;
 - grounds around day care facilities;
 - school yards;
 - parks (except industrial parks);
 - playgrounds; and
 - athletic fields (except professional and college athletic fields under the conditions listed below).
- Do not apply this product by air.
- Do not graze treated areas or feed clippings to livestock.
- Turfcide 400 may only be used on professional and college athletic fields for the following diseases: gray snow mold and pink snow mold. See Use and Rate Requirements for Non-Residential Turf table for additional information.
- For all Non-Residential Turf use applications, Mixers and Loaders cannot handle more than 150 gallons product per day (equivalent to 600 lbs. A.I. /day).
- Use of any hand-held application equipment is prohibited except for greenhouse use.
- Apply by ground boom application only except for greenhouse use.
- For Sod farm applications, applicators cannot handle more than 425 gallons of product per day (equivalent to 1,700 lbs. A.I. /day).

COMPATIBILITY

For broad spectrum disease control, this product can be tank mixed with compatible products. Follow more restrictive labeling or precautions on the label of any tank mix product. Do not exceed dosage rates on any label. This product cannot be mixed with any product containing a label prohibition against such mixing. Do not tank mix with other chemicals unless prior use has proven compatibility.

TURF

Turfcide 400 is a fungicide for the prevention and control of certain soil borne diseases on

- golf course tees, greens, and fairways,
- sod farms, and industrial parks and professional and college athletic fields where turf is grown.

Restrictions: Turfcide 400 may only be used on professional and college athletic fields for the following diseases: gray snow mold and pink snow mold. See the Use and Rate Requirements for Turf table for additional directions for professional and college athletic fields.

For best results use Turfcide 400 as a preventive application before diseases appear, however, if you do not apply as a preventive treatment, then apply Turfcide 400 at first sign of disease.

Following application, water areas treated with Turfcide 400 in order to move material down to the soil level. If treated area is subjected to flooding or unusually heavy rainfall, or if disease is severe or reappears, treat the area again.

See Use and Rate Requirements for Non-Residential Turf table for retreatment intervals.

Under certain growing conditions, a temporary discoloration of the grass may occur. This causes no harm and will disappear in a short time.

USE AND RATE REQUIREMENTS FOR NON- RESIDENTIAL TURF*

DISEASE	TURF TYPE	FL. OZ. PRODUCT PER 1000 SQ. FT	APPLICATION DIRECTIONS
Brown Patch (<i>Rhizoctonia solani</i>)	Warm climate grasses such as: St. Augustine Bermuda	16 to 24	Mix specified amount in 1 to 10 gals of water and apply a single application in the Spring or Fall at first indication of disease. If disease is severe or reappears, retreat area 3 to 4 weeks later. After application, immediately irrigate with 1/4 inch water.
	Dichondra	16 to 24	Mix specified amount in 5 to 10 gals of water and treat as above. After application, immediately irrigate with 1/4 inch water.
Brown Patch (<i>Rhizoctonia solani</i>) Anthracnose (<i>Colletotrichum cereal</i>)	Cool climate grasses such as: Bluegrass Ryegrass Fescue Bent	5 to 6	Mix specified amount in 1 to 10 gals of water and apply at first sign of disease. Repeat every 7 to 10 days during warm, damp weather. For control of existing infections, apply at specified higher rates as soon as symptoms appear. Do not apply at daytime temperatures of 85° or higher. After application, immediately irrigate with 1/4 inch water. Mowing may not occur in treated area until

DISEASE	TURF TYPE	FL. OZ. PRODUCT PER 1000 SQ. FT	APPLICATION DIRECTIONS
			one day after application.
Melting Out/ Leaf Spot** (<i>Drechslera spp.</i> , <i>Biopolaris spp.</i> , <i>Exserohilum spp.</i>) Dollar Spot** (<i>Sclerotinia homeocarpa</i>)	All	11 to 16	Mix specified amount in 1 to 10 gals of water and apply as a preventive application in the spring or fall of each year. For control of existing infections, apply at specified higher rates as soon as symptoms appear. Do not apply at daytime temperatures of 85°F or higher. After application, immediately irrigate with 1/4 inch water. Mowing may not occur in treated area until one day after application.
Gray Snow Mold*** (<i>Typhula spp.</i>) Pink Snow Mold*** (<i>Microdochium nivale</i>)	Cool climate grass	12 to 16	Mix specified amount in 1 to 10 gals of water and apply one application prior to first snowfall or when temperatures remain below 60°F and extended wet conditions are expected. In the absence of snow cover, supplemental applications of 3 to 6 fl. oz. can be applied at 4 to 6 week intervals to maintain control when disease pressure is severe. Note: Turfcide 400 must be moved into the soil thatch layer to be effective. Applications must be followed by 1/4 inch of irrigation water or rainfall on day of application. If sufficient rainfall does not occur on day of application, then treated areas must be irrigated with 1/4 inch of water on day of application.

*For all Non-Residential Turf use applications, Mixers and Loaders cannot handle more than 150 gallons product per day (equivalent to 600 lbs. A.I. /day). Single applications must not exceed 33 lbs. A.I. /A, and total seasonal applications must not exceed 66 lbs. A.I. /A.

** Use not registered by California Department of Pesticide Registration

***Conditions under which professional and college athletic fields may be treated:

- applications are limited to Fall and Winter months for pink or grey snow mold;
- no more than 3 applications may be made per season (October – March), with a minimum of 14 days between applications;
- applicators must ensure that the treated area will be idle for at least 2 days after application.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep container closed when not in use. In case of spill or leak on floor or paved surfaces, soak up with sand, earth or synthetic absorbent. Remove to chemical waste area.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. 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:

Non-refillable container: Do not reuse or refill this container.

For containers 5 gallons in size or smaller:

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 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.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For containers larger than 5 gallons:

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; and (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN TORT, CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF,

OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW MANUFACTURER OR SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

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AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200,
Newport Beach, CA 92660 USA



TURF and ORNAMENTAL CROP FUNGICIDE

ACTIVE INGREDIENT:

(% by weight)

Pentachloronitrobenzene (PCNB)10.0%

INERT INGREDIENTS:90.0%

TOTAL:100.0%

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.)

FIRST AID	
If in eyes:	<ul style="list-style-type: none"> 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 center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.
If inhaled:	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then, give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
EMERGENCY INFORMATION	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY: For Medical Emergencies phone:1-888-681-4261 For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC®1-800-424-9300 For Product Use Information phone: AMVAC®1-888-462-6822	

SEE SIDE/BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

EPA Reg. No. 5481-8988

Net Contents: _____ Lbs.

EPA Est. No. _____



AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200,
Newport Beach, CA 92660, USA

Made in USA

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed, inhaled or absorbed through skin. Avoid breathing dust. This material may cause skin irritation. Avoid contact with eyes, skin or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, 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.
- 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 clothes.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. Cover, collect, or incorporate spilled granules. Do not contaminate water when disposing of equipment washwaters. Do not apply directly adjacent to potable water supplies. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark.

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 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 intervals. 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.

Exception: if the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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
- Chemical-resistant gloves made of any waterproof materials
- Shoes plus socks

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), WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Do not enter or allow others to enter treated areas until area has been irrigated or rainfall on day of application and turf has dried. If sufficient rainfall does not occur on day of application, then treated areas must be irrigated with 1/4 inch of water on day of application.

PRODUCT INFORMATION

TURFCIDE 10G is a preventive fungicide labeled for control of certain soil borne diseases on non-residential turf (golf course tees, greens and fairways, sod farms, industrial parks, and professional and college athletic fields), and non-residential ornamentals . Best results are achieved when used in a preventive program. Follow specified rates and application directions. Carefully read, understand and follow label directions.

Resistance Management

For resistance management, Turfcide 10G contains PCNB, a Group 14 fungicide. Any fungal population may contain individuals naturally resistant to Turfcide 10G and other Group 14 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same location. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of Turfcide 10G or other Group 14 fungicides with different groups that control the same pathogens.
- Use tank mixtures with fungicides from a different group that are 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 (agricultural uses), 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 pest control advisor for any additional pesticide resistance-management and/or IPM recommendations for specific pathogens.

For further information or to report suspected resistance contact AMVAC at (1-888-462-6822). You can also contact your pesticide distributor or university extension specialist to report resistance.

Product Restrictions

- Use of Turfcide 10G is prohibited on
 - golf course roughs;
 - residential sites including lawns, yards, and ornamental plants and gardens around homes and apartments;
 - grounds around day care facilities;
 - school yards;
 - parks (except industrial parks);
 - playgrounds; and
 - athletic fields (except professional and college athletic fields under the conditions listed below) .
- Do not graze treated areas or feed clippings to livestock.
- Do not plant root crops in PCNB treated fields within 12 months of the last application of PCNB unless PCNB is registered for use on those crops.
- Use of any hand held application equipment is prohibited except for applications to growing media mix.

- Aerial application is prohibited.
- For broadcast and band applications, apply using tractor drawn equipment only.
- For Sodfarm applications,
 - Mixers/loaders cannot handle more than 23,000 lbs. of product per day (equivalent to 2,300 lbs. A.I. /day).
 - Applicators cannot handle more than 26,000 lbs. of product per day (equivalent to 2,600 lbs. A.I. /day).
- For Woody Ornamentals:
 - Mixers/loaders cannot handle more than 23,000 lbs. of product per day (equivalent to 2,300 lbs. A.I. /day).
 - Granular spreader applicators cannot handle more than 26,000 lbs. of product per day (equivalent to 2,600 lbs. A.I. /day).
 - Backpack applicators cannot handle more than 1,300 lbs. of product per day (equivalent to 130 lbs. A.I. /day).

NON-RESIDENTIAL TURF

Turficide 10G is a fungicide for the prevention and control of certain soil borne diseases on

- golf course tees, greens, and fairways,
- sod farms, and industrial parks and professional and college athletic fields where turf is grown.

Restrictions: Turficide 10G may only be used on professional and college athletic fields for the following diseases: gray snow mold and pink snow mold. See the Use and Rate Requirements for Non-Residential Turf table for additional directions for professional and college athletic fields.

For best results use Turficide 10G as a preventive application before diseases appear, however, if you do not apply as a preventive treatment, then apply Turficide 10G at first sign of disease.

Following application, water areas treated with Turficide 10G in order to move material down to the soil level. If treated area is subjected to flooding or unusually heavy rainfall, or if disease is severe or reappears, treat the area again.

Under certain growing conditions, a temporary discoloration of the grass may occur. This causes no harm and will disappear in a short time.

SPREADER SETTINGS

SPREADER MODEL	EFFECTIVE WIDTH (FT.)	RATE (LBS)/1000 SQ. FT.			
		2.5	5.0	7.5	10
CYCLONE	3	3.5	3.75	4.0	4.25
SCOTTS R-8A (CONE #7)	8	H.5	K	M	N.5
SPYKER	4	3.0	3.6	4	4.2
JOHN DEERE	4	3.0	3.6	4	4.2
LESCO (SLIDE SET=0)	4	B	C.5	E	F
	8	C.5	F	G.5	H.7
VICON	20	14	22	29	35
LELY (FEEDRING SET=IIIC)	10	2.25	3.25	3.5	3.7
	20	3.25	4.25	5.25	6
PRIZELAWN (SLIDE SET=A)	3	2.75	3.25	3.50	3.7
GANDY (DROP TYPE)	2	17	22	26	29
SEARS	-	6.5	7.5	9	10.5

Lely and Vicon spreaders calibrated at 4.5 MPH and 540 PTO RPM. All others were ground driven at 3.0 MPH. These settings apply to 20/40 mesh granular carriers. The spreader settings listed above are approximate. Accurately weigh a few pounds into your spreader and apply to measured area. Then adjust spreader settings, if necessary in order to assure correct rate of application.

USE AND RATE REQUIREMENTS FOR NON-RESIDENTIAL TURF*

DISEASE	TURF TYPE	POUNDS PRODUCT PER 1000 SQ. FT.	APPLICATION DIRECTIONS See Restrictions on Amount of Product that can be Handled per Day below table.
Brown Patch (<i>Rhizoctonia solani</i>)	Warm climate grasses such as: St. Augustine Bermuda	7 1/2	Apply one application in the spring or at first indication of disease. If disease is severe or reappears, retreat 3 to 4 weeks later. After application, immediately irrigate with 1/4 inch water. Mowing may not occur in treated area until one day after application.
	Dichondra	7 1/2	Treat as above. After application, immediately irrigate with 1/4 inch water.
	Cool climate grasses such as: Bluegrass Ryegrass Fescue Bent	2 to 2 1/2	Apply at first sign of disease. Repeat every 7 to 10 days during warm, damp weather. For control of existing infections, apply at higher specified rates as soon as symptoms appear. After application, immediately irrigate with 1/4 inch water. Mowing may not occur in treated area until one day after application.
Leaf Spot/Melting Out (<i>Drechslera spp.</i> , <i>Biopolaris spp.</i> , <i>Exserohilum spp.</i>)	All	5 to 7 1/2	Make preventive applications in spring or fall of each year. For control of existing infections, apply at higher specified rate as soon as symptoms appear.
Dollar Spot** (<i>Sclerotinia homeocarpa</i>)			If disease is severe or reappears, re-treat the area 3 to 4 weeks later. After application, immediately irrigate with 1/4 inch water. Mowing may not occur in treated area until one day after application.

DISEASE	TURF TYPE	POUNDS PRODUCT PER 1000 SQ. FT.	APPLICATION DIRECTIONS See Restrictions on Amount of Product that can be Handled per Day below table.
Gray Snow Mold*** (<i>Typhula spp.</i>)	Cool climate grass	5 to 10	Make one application of 5 to 10 lbs. per 1000 sq. ft. prior to first snowfall or when temperatures remain below 60°F and extended wet conditions are expected.
		5 to 7 1/2	Rate for professional and college athletic fields. Applications must be followed by 1/4 inch of irrigation water or rainfall on day of application. If sufficient rainfall does not occur on day of application, then treated areas must be irrigated with 1/4 inch of water on day of application.
Pink Snow Mold*** (<i>Microdochium nivale</i>)		5 to 7 1/2	In the absence of snow cover, applications of 5 to 7 1/2 lbs. can be applied at 4 to 6 week intervals to maintain control when disease pressure is severe. NOTE: Turfcide 10G must be moved into the soil/thatch layer to be effective. Applications must be followed by 1/4 inch of irrigation water or rainfall on day of application. If sufficient rainfall does not occur on day of application, then treated areas must be irrigated with 1/4 inch of water on day of application.

For Sod-Farm Use: Mixers and Loaders cannot handle more than 23,000 lbs. of product/day (equivalent to 2,300 lbs. A.I. / day), and applicators cannot handle more than 26,000 lbs. of product/day (equivalent to 2,600 lbs. A.I. /day).

*Single applications must not exceed 43.56 lbs. A.I. /A, and total seasonal applications must not exceed 87.12 lbs. A.I. /A.

**Use not registered by California Department of Pesticide Registration.

***Conditions under which professional and college athletic fields may be treated:

- applications are limited to Fall and Winter months for pink or grey snow mold;
- no more than 3 applications may be made per season (October – March), with a minimum of 14 days between applications;
- applicators must ensure that the treated area will be idle for at least 2 days after application.
- single applications must not exceed 33 lbs. A.I. /A, and total seasonal applications must not exceed 66 lbs. A.I. /A.

NON-RESIDENTIAL ORNAMENTALS

Turfcide 10G can be used as a soil treatment for protection against a variety of soil borne diseases in

- greenhouse,
- shadehouse,
- nursery,
- landscape and
- field grown ornamentals

Restrictions: Use of Turfcide 10G is prohibited on ornamental plants in

- residential settings including lawns, yards, gardens around homes and apartments;
- grounds around day care facilities;
- school yards;
- parks (except industrial parks);
- playgrounds; and
- athletic fields.

Mix Turfcide 10G in the soil for best results. See the Use and Rate Requirements for Non-Residential Ornamentals table for specific plant and disease directions.

When a rate range is shown, use the lower rate on coarse textured (light) soils or when disease pressure is expected to be low. Use the higher rates on fine textured (heavy) soils in fields with a history of disease problems, or when weather conditions are expected to be unfavorable for rapid germination and growth of seedlings.

USE AND RATE REQUIREMENTS FOR NON-RESIDENTIAL ORNAMENTALS

CROP	DISEASE	POUNDS PRODUCT PER 1000 SQ. FT.	APPLICATION DIRECTIONS See Restrictions on Amount of Product that can be Handled per Day below table.
Woody Ornamentals	Root/Stem Rot, Damping Off (<i>Rhizoctonia solani</i>) (<i>Pellicularia filamentosa</i>)	15	BROADCAST: Spread evenly on the soil surface and thoroughly mix into the top 2 inches of soil. Apply to a well prepared seed bed.
	Stem Rot (<i>Sclerotinia sclerotiorum</i>)	20	BROADCAST: Apply one week prior to planting. Spread evenly on the soil surface and thoroughly mix into the soil to a depth of 4 inches.
	Root/Stem Rot, Damping Off (<i>Rhizoctonia solani</i>) (<i>Pellicularia filamentosa</i>) (<i>Sclerotinia sclerotiorum</i>)		GROWING MEDIA MIX: Mix 1 to 1.5 lbs. of product per cubic yard of media. To prevent agglomeration, ensure that ingredients are dry and free of large bumps. Blend thoroughly to ensure uniform distribution throughout the mixture. Use the lower rate for mixtures used at the time of seeding or transplanting of young seedlings or plugs. Use the higher rate for older plants or nursery stock. Do not mix more than 10 cubic yards of media mix/day.
Vegetable Bedding Plants: Limited to only	Root/Stem Rot, Damping Off (<i>Rhizoctonia</i>		GROWING MEDIA MIX: Mix 1 to 1.5 lbs. of product per cubic yard of media. To prevent agglomeration, ensure that ingredients are dry and free of large bumps. Blend

CROP	DISEASE	POUNDS PRODUCT PER 1000 SQ. FT.	APPLICATION DIRECTIONS See Restrictions on Amount of Product that can be Handled per Day below table.
container grown- Broccoli Brussel Sprouts Cabbage Cauliflower	<i>solani</i> (<i>Pellicularia filamentosa</i>) (<i>Sclerotinia sclerotiorum</i>)		thoroughly to ensure uniform distribution throughout the mixture. Use the lower rate for mixtures used at the time of seeding or transplanting of young seedlings or plugs. Use the higher rate for older plants or nursery stock. Do not mix more than 10 cubic yards of media mix /day.

NON-RESIDENTIAL ORNAMENTAL RESTRICTIONS FOR AMOUNT OF PRODUCT HANDLED PER DAY:

Mixers and Loaders cannot handle more than 23,000 lbs. of product/day (equivalent to 2,300 lbs. A.I. /day).

Applicators using granular spreader equipment for broadcast and band applications cannot handle more than 26,000 lbs. of product/day (equivalent to 2,600 lbs. A.I. /day).

Backpack applicators cannot handle more than 1,300 lbs. of product per day (equivalent to 130 lbs. A.I. /day).

PLANT TOLERANCE:

Neither the manufacturer nor the seller has determined whether or not TURFCIDE 10G can be used safely on plants not specified on this label. Prior to any large scale application on such plants, the user should determine the safety of TURFCIDE 10G fungicide by testing a small number of the type of plants to be treated.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a dry location.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. 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 DISPOSAL: Paper Bags: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then dispose of bag in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Cardboard Canisters: (Commercial) Nonrefillable container. Do not reuse or refill this container. Completely empty canisters into application equipment. Then dispose of container in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; and (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY

RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN TORT, CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW MANUFACTURER OR SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

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AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200,
Newport Beach, CA 92660, USA

Terraclor® 400

FLOWABLE ORNAMENTAL FUNGICIDE

ACTIVE INGREDIENT:	(% by weight)
Pentachloronitrobenzene (PCNB)	40.0%
INERT INGREDIENTS:	60.0%
TOTAL:	100.0%

Contains 4 lbs. of Pentachloronitrobenzene per U.S. gallon

Contains petroleum distillates, xylene or xylene range aromatic solvents

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.)

FIRST AID	
If in eyes:	<ul style="list-style-type: none"> 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 center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If Inhaled:	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, and give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
If swallowed:	<ul style="list-style-type: none"> Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
EMERGENCY INFORMATION	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY: For Medical Emergencies phone:.....1-888-681-4261 For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC®.....1-800-424-9300 For Product Use Information phone: AMVAC®.....1-888-462-6822	
NOTE TO PHYSICIAN	
Contains petroleum distillate. Vomiting may cause aspiration pneumonia.	

SEE SIDE/BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

EPA Reg. No. 5481-8992
EPA Est. No. _____

Net Contents: _____ Gallons.



AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200,
Newport Beach, CA 92660 USA

Made in USA

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye irritation. Harmful if absorbed through the skin or inhaled. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category E on an EPA chemical resistance category selection chart.

Applicators and other handlers (other than mixers and loaders) must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, or nitrile rubber, or neoprene rubber or Viton®
- Shoes plus socks

Mixers and Loaders Must Wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, or nitrile rubber, or neoprene rubber or Viton
- Shoes plus socks
- For exposures in enclosed areas: A respirator with an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P, or HE prefilter.
- For exposure outdoors: Dust/Mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P or HE filter.

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

User Safety Requirements

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, 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.
- 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 fish and aquatic organisms. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites. 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 when disposing of equipment wash waters.

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 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 intervals. 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.

Exception: if the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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
- Chemical-resistant gloves such as barrier laminate or nitrile rubber, or neoprene rubber, or Viton
- Shoes plus socks

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. Do not enter or allow others to enter treated areas until area has been irrigated and turf has dried.

PRODUCT INFORMATION

Terraclor 400 is a preventive fungicide labeled for control of certain soil borne diseases of non-residential ornamentals. Best results are achieved when used in a preventive program. Follow specified rates and application directions. Carefully read, understand and follow label directions.

Resistance Management

For resistance management, Terraclor 400 contains PCNB, a Group 14 fungicide. Any fungal population may contain individuals naturally resistant to Terraclor 400 and other Group 14 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same location. Appropriate resistance-management strategies should be followed.

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

- Rotate the use of Terraclor 400 or other Group 14 fungicides with different groups that control the same pathogens.
- Use tank mixtures with fungicides from a different group that are 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 (agricultural uses), 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 pest control advisor for any additional pesticide resistance-management and/or IPM recommendations for specific pathogens.

For further information or to report suspected resistance contact AMVAC at (1-888-462-6822). You can also contact your pesticide distributor or university extension specialist to report resistance.

Product Restrictions

- Use of Terraclor 400 is prohibited on
 - golf course roughs;
 - residential sites including lawns, yards, and ornamental plants and gardens around homes and apartments;
 - grounds around day care facilities;
 - school yards;
 - parks (except industrial parks);
 - playgrounds; and
 - athletic fields
- Do not apply this product by air.
- Chemigation or pesticide applications through irrigation systems are only permitted for ornamentals and foliar potato applications. Do not apply this product to any other crops through any type of irrigation systems.
- Do not graze treated areas or feed clippings to livestock.
- For Cole Crop applications, Mixers and Loaders cannot handle more than 150 gallons product per day (equivalent to 600 lbs. A.I. /day). Applicators cannot apply more than 337 gallons of product per day (1,350 lbs. A.I. /day)
- Do not plant root crops in PCNB treated fields within 12 months of the last application of PCNB unless PCNB is registered for use on those crops.
- Use of any hand-held application equipment is prohibited except for greenhouse use.
- Apply by ground boom application only except for greenhouse use.
- Airblast application may be used on Southern Magnolia Trees, applicators cannot handle more than 4.5 gallons of product per day (18 lbs. A.I. /day).
- For Non-Residential Ornamentals (Woody Plants, Southern Magnolia Trees, Southern Pine Seed and Seedlings, Vegetable Bedding Plants:
 - Groundboom, airblast, and chemigation applications: mixers/loaders cannot handle more than 190 gallons of product per day (equivalent to 760 lbs. A.I. /day).
 - Groundboom applicators cannot handle more than 425 gallons of product per day (equivalent to 1,700 lbs. A.I. /day).
 - Soil drench mixer/loader/applicators cannot handle more than 0.42 gallons product per day (equivalent to 1.68 lbs. A.I. /day).
- For Vegetable Bedding Plants, applicators cannot handle more than 1 pint product per 1000 square feet (equivalent to 20.4 lbs. A.I. /Acre) per season.

COMPATIBILITY

For broad spectrum disease control, this product can be tank mixed with compatible products. Follow more restrictive labeling or precautions on the label of any tank mix product. Do not exceed dosage rates on any label. This product cannot be mixed with any product containing a label prohibition against such mixing. Do not tank mix with other chemicals unless prior use has proven compatibility.

ORNAMENTALS

Terraclor 400 can be used as a soil treatment for protection against a variety of soil borne diseases in

- greenhouse,
- shadehouse,
- nursery,
- landscape and
- field grown ornamentals.

Use of Terraclor 400 is prohibited on ornamental plants in

- residential settings including lawns, yards, gardens around homes and apartments;
- grounds around day care facilities;
- school yards;
- parks (except industrial parks);
- playgrounds; and
- athletic fields.

Continuously agitate the mixture of Terraclor 400 and water to assure uniform application.

Drench the soil thoroughly with Terraclor 400 solution for best results.

See Use and Rate Requirements for Non-Residential Ornamentals table for specific plants and diseases.

When a rate range is shown, use the lower rate on coarse textured (light) soils or when disease pressure is expected to be low. Use the higher rates on fine textured (heavy) soils in fields with a history of disease problems, or when weather conditions are expected to be unfavorable for rapid germination and growth of seedlings.

USE AND RATE REQUIREMENTS FOR NON-RESIDENTIAL ORNAMENTALS

CROP	DISEASE	PRODUCT APPLICATION RATE	APPLICATION DIRECTIONS		
Woody Plants**	Root/Stem Rot Damping Off (<i>Rhizoctonia solani</i>) (<i>Pellicularia filamentosa</i>) Black Rot (<i>Sclerotinia sclerotiorum</i>)	3/8 to 3/4 pints (6 to 12 fl. oz.)	SOIL DRENCH: Mix specified amount in 100 gallons of water and apply as follows:		
			BED, BENCH, CONTAINER & FIELD GROWN PLANTS		
			Depth of Soil (inches)	Quantity of Product Drench Solution	
				Fl. Oz./Sq. Ft.	(Sq. Ft./100 gals of drench solution)
			≤ 2	16	800
			3	24	530
			≥ 4	32	400
			POTTED PLANTS		
			Pot Diameter (inches)	Minimum Quantity of Product Drench Solution (Fl. Oz./Pot)	
			4	1.5	

CROP	DISEASE	PRODUCT APPLICATION RATE	APPLICATION DIRECTIONS	
			5	3
			6	4
			8	7
			10	13
			12	18
			One repeat application may be made 4 to 6 weeks following the first application.	
		5 1/4 pints (84 fl. oz.)	BROADCAST INCORPORATED PRIOR TO PLANTING IN THE FIELD: Apply specified amount to 1000 sq. ft. in sufficient water to assure uniform ground coverage. Thoroughly incorporate to a depth of 4 inches.	
Gladiolus Hyacinth Iris (bulbous) (dutch) Narcissus Tulip	Root Rot/ Stem Rot / Bulb Rot (<i>Rhizoctonia solani</i>) (<i>Pellicularia solani</i>) Bulb Rot/ Crown Rot (<i>Sclerotinia rolfii</i>) (<i>Pellicularia rolfii</i>) Black Rot (<i>Sclerotinia sclerotiorum</i>)	3 pints (48 fl. oz.)	BULB SOAK: Mix specified amount in 3.2 gals. of water (7.5% concentrations). Add 1% sticker to mixture and maintain good agitation. Soak bulbs for 5 minutes.	
Lilies (Easter) (Asiatic) (Oriental)	Root Rot/ Stem Rot (<i>Rhizoctonia solani</i>) (<i>Pellicularia solani</i>) Bulb Rot/ Crown Rot (<i>Sclerotinia rolfii</i>) (<i>Pellicularia rolfii</i>) Stem Rot/Black Rot (<i>Sclerotinia sclerotiorum</i>)	6 to 9 pints (96 to 144 fl. oz.)	BULB SOAK: Mix specified amount in 100 gals. of water. A sticking agent may be added. Maintain good agitation in dip tanks. Soak bulbs in mixture for 5 to 15 minutes.	
Southern Magnolia Trees**	Magnolia Leaf Spot (<i>Phyllostica cookeri</i>)	3 pints (48 fl. oz.)	FOLIAR SPRAY APPLICATION: Apply specified amount in 100 gallons of water. Add a spreader-sticker at the rate of 1 pint per 100 gallons. Begin applications approximately 1 week before disease normally appears. Apply at least 4 sprays at 2 week intervals. NOTE: Do not use on Magnolia fuscata as injury may result.	

CROP	DISEASE	PRODUCT APPLICATION RATE	APPLICATION DIRECTIONS									
			Single applications must not exceed 33 lbs. A.I. /A, and total seasonal applications must not exceed 66 lbs. A.I. /A. Mixers and Loaders cannot handle more than 150 gallons of product per day (equivalent to 600 lbs. A.I. /day). Applicators cannot apply more than 4.5 gallons of product per day (equivalent to 18 lbs. A.I. /day).									
Southern Pine Seed or Seedlings**	Root/Stem Rot, Damping Off (<i>Rhizoctonia spp.</i>) (<i>Pellicularia filamentosa</i>) Needle Blight (<i>Dothistromapini</i>)	2 pints (32 fl. oz.)	BROAD CAST APPLICATION PRIOR TO PLANTING: Apply specified amount to 1000 sq. ft. in 5-10 gallons of water to insure uniform coverage. Irrigate with an additional 1/2 inch of water following treatment. Seed may be planted immediately following irrigation or within one week of irrigation.									
Vegetable Bedding Plants Limited to only Container grown** Broccoli* Brussels Sprouts* Cabbage* Cauliflower* Chinese broccoli* Chinese cabbage*	Root/Stem Rot, Damping Off (<i>Rhizoctonia solani</i>) (<i>Pellicularia filamentosa</i>)	<u>800 Sq. ft./100 gal</u> 3/8 to 3/4 pints (6 to 12 fl. oz.)	SOIL DRENCH APPLICATIONS: For soil drench applications in the nursery or greenhouse to seedlings grown in containers or beds prior to transplanting into the field. Mix specified amount in 100 gals of water and apply according to the following guidelines: <table border="1"><tr><th colspan="3">Soil Depth Coverage for Terraclor 400 Drench Solution</th></tr><tr><th><u>Inches</u></th><th><u>Drench Solution Fl. oz./Sq. ft.</u></th><th><u>Sq. ft./100gals</u></th></tr><tr><td>2 or less</td><td>16</td><td>800</td></tr></table> For Container Grown Plants: If the spray solution was prepared using 6 fl. oz. of product per 100 gals spray volume, one repeat application may be made with 12 fl. oz. product per 100 gals spray volume 4 to 6 weeks later, if necessary. Do not apply more than 1 pint product per 1000 square feet (20.4 lbs. A.I. /A) per season.	Soil Depth Coverage for Terraclor 400 Drench Solution			<u>Inches</u>	<u>Drench Solution Fl. oz./Sq. ft.</u>	<u>Sq. ft./100gals</u>	2 or less	16	800
Soil Depth Coverage for Terraclor 400 Drench Solution												
<u>Inches</u>	<u>Drench Solution Fl. oz./Sq. ft.</u>	<u>Sq. ft./100gals</u>										
2 or less	16	800										

*For Cole Crop applications, Mixers and Loaders cannot handle more than 150 gallons product per day (equivalent to 600 lbs. A.I. /day). Applicators cannot apply more than 337 gallons of product per day (1,350 lbs. A.I. /day).

**NON-RESIDENTIAL ORNAMENTAL RESTRICTIONS FOR AMOUNT OF PRODUCT HANDLED PER DAY:

- For Non-Residential Ornamentals (Woody Plants, Southern Magnolia Trees, Southern Pine Seed and Seedlings, Vegetable Bedding Plants:
 - Groundboom, airblast, and chemigation applications: mixers/loaders cannot handle more than 190 gallons of product per day (equivalent to 760 lbs. A.I. /day).
 - Groundboom applicators cannot handle more than 425 gallons of product per day ((equivalent to 1,700 lbs. A.I. /day).
 - Soil drench mixer/loader/applicators cannot handle more than 0.42 gallons product per day (equivalent to 1.68 lbs. A.I. /day).

CHEMIGATION

APPLICATION THROUGH SPRINKLER IRRIGATION EQUIPMENT

In addition to the use rates and directions specified above, the following restrictions must be observed when using this product in any type of irrigations system:

For Ornamentals, apply Terraclor 400 only through the following irrigation systems:

1) Pressurized drench (flood) or drip (trickle), 2) Micro-irrigation such as spaghetti-tube or individual tube irrigation, 3) Hand-held calibrated irrigation equipment such as the hand-held wand with injector, 4) Calibrated overhead watering booms, 5) Ebb and flow or bench flooding sub-irrigation systems.

Do not apply this product through any other type of irrigation system. Crop injury or lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system, (including greenhouse systems), used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The system must contain a functional check valve, vacuum relief valve, and a low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur. Do not apply when wind speed favors drift beyond the area intended for treatment.

SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year.

Chemigation systems connected to public water systems must contain a functional, reduced pressure zone (RPZ), backflow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water systems should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where the pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

IMPORTANT INFORMATION

To protect endangered aquatic species, use one of the following options when applying Terraclor 400 through sprinkler irrigation equipment:

1. Apply only when there is sustained wind away from fish-bearing waters, or
2. Leave a 50 foot untreated buffer between treatment area and fish-bearing waters.

To protect endangered aquatic species, use one of the following options when applying Terraclor 400 through ground equipment:

1. Apply only when there is sustained wind away from fish-bearing waters,
2. Leave a 25 foot untreated buffer between treatment area and fish-bearing waters, or
3. Use low-pressure nozzles according to manufacturer's specifications that produce only coarse or very coarse droplets.

PLANT TOLERANCE:

Neither the manufacturer nor the seller has determined whether or not Terraclor 400 can be used safely on ornamental plants not specified on this label. Prior to any large scale application on such plants, the user should determine the safety of Terraclor 400 by testing a small number of the type of plants to be treated at the labeled rates for that particular group, i.e., bedding plants, foliage, etc. and observing the treated plants over a one to two week period for symptoms of phytotoxicity, which may occur as foliage burn or stunted growth.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep container closed when not in use. In case of spill or leak on floor or paved surfaces, soak up with sand, earth or synthetic absorbent. Remove to chemical waste area.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. 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:

Non-refillable container: Do not reuse or refill this container.

For containers 5 gallons in size or smaller:

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 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.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For containers larger than 5 gallons:

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; and (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN TORT, CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW MANUFACTURER OR SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

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AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200,
Newport Beach, CA 92660 USA

Group	14	Fungicide
Group	3	Fungicide

PREMION[®]

FUNGICIDE

FLOWABLE TURF FUNGICIDE

ACTIVE INGREDIENTS:	(% by weight)
Pentachloronitrobenzene (PCNB)	37.82%
Tebuconazole	2.50%
INERT INGREDIENTS:	59.68%
TOTAL:	100.00%
Contains 4.00 lbs. of Pentachloronitrobenzene per U.S. gallon	
Contains 0.265 lb. of tebuconazole per U.S. gallon	
Contains petroleum distillates	

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.)

FIRST AID	
If in eyes:	<ul style="list-style-type: none"> 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. Call a poison control center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If inhaled:	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
If swallowed:	<ul style="list-style-type: none"> Immediately call a poison control center or doctor. Do not induce vomiting unless told to by a poison control center or doctor. Do not give any liquid to the person. Do not give anything to an unconscious person.
EMERGENCY INFORMATION	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</p> <p>FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:</p> <p>For Medical Emergencies phone:.....1-888-681-4261</p> <p>For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC[®].....1-800-424-9300</p> <p>For Product Use Information phone: AMVAC[®].....1-888-462-6822</p>	
NOTE TO PHYSICIAN	
Contains petroleum distillate. Vomiting may cause aspiration pneumonia.	

SEE SIDE/BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

EPA Reg. No. 5481-585
EPA Est. No. _____

Net Contents: ___ Lbs.



AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200
Newport Beach, CA 92660 U.S.A.



PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin or inhaled. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Remove and wash contaminated clothing before reuse. Wear: long-sleeved shirt and long pants, socks, shoes and gloves.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below.

Applicators and other handlers (other than mixers and loaders) must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, or nitrile rubber, or neoprene rubber or Viton®
- Shoes plus socks.

Mixers and Loaders Must Wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, or nitrile rubber, or neoprene rubber or Viton
- Shoes plus socks
- For exposures in enclosed areas: A respirator with an organic vapor-removing cartridge with a combination filter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P, or HE combination filter.
- For exposure outdoors: Particulate filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P or HE filter.

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

User Safety Requirements

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, 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.
- 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 fish and aquatic organisms. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites. 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 when cleaning equipment or disposing of equipment washwaters.

Ground Water Advisory: Tebuconazole is known to leach through soil into ground water under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

Surface Water Advisory: This product may contaminate water through drift of spray in wind. This product has a high potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to runoff that contains this product. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted within 48 hours.

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.

APPLICATION INFORMATION

PREMION controls turfgrass diseases by systemic and contact action. Applications that use sufficient water volume to provide thorough and uniform coverage of the turfgrass provide the most consistently effective disease control. Apply PREMION to turfgrass that is well established, actively growing and not under excessive heat, moisture, or turf growth regulator stress or drought stress. Apply at labeled interval to maintain disease control or use as part of a program that consists of a sequence of fungicide active ingredients specific for diseases that are historically active on the turfgrass site when it is predisposed by environmental or agronomically-induced conditions. Apply the specified amount of PREMION in 1 to 4 gallons of water per 1,000 square feet (43.65 to 174.24 gallons per acre) of turfgrass. Apply PREMION after mowing turfgrass. Do not mow treated turf for 24 hours after PREMION has been applied. Do not apply PREMION when daytime high temperatures exceed 85° F. Applications of PREMION should be followed by 0.1 to 0.25 inch of irrigation water or rainfall on the day of application. Treated areas should be irrigated if sufficient rainfall does not occur on the day of application. All applications of PREMION must be made in accordance with the directions for use on this label.

RESTRICTIONS

- Only for use on golf course turf – greens, tees and fairways only.
- Do not use on golf course roughs.
- Do not apply by aerial application.
- Do not apply this product through any type of irrigation system.
- Use of PREMION is prohibited on golf course roughs; residential sites, including lawns, yards, and ornamental plants and gardens around homes and apartments; grounds around day care facilities; school yards; parks; playgrounds; and athletic fields.
- Mixers and Loaders cannot handle more than 150 gallons of product per day (equivalent to 601 lbs. AI of PCNB/day).
- Use of any hand-held application equipment is prohibited.
- Apply by ground boom application only.
- Do not use on turf grown for sale or commercial use as sod.
- Do not make more than 6 applications per year.
- Maximum single application rate is 12 fluid ounces of PREMION per 1,000 square feet (4.08 gallons per acre; 16.34 lbs. AI/A of PCNB and 1.08 lbs. AI/A of tebuconazole).

- In New York State, the maximum single application rate is 8 fluid ounces of PREMION per 1,000 square feet (2.72 gallons per acre; 10.89 lbs. AI/A of PCNB and 0.72 lb. AI/A of tebuconazole).
- Do not exceed 32 fluid ounces of PREMION per 1,000 square feet per year (10.89 gallons per acre per year; 43.56 lbs. AI/A of PCNB and 2.89 lbs. AI/A of tebuconazole per year).
- In New York State, do not exceed 24 fluid ounces of PREMION per 1,000 square feet per year (8.17 gallons per acre per year; 32.67 lbs. AI/A of PCNB and 2.16 lbs. AI/A of tebuconazole per year).
- Do not use clippings for animal feed.
- Do not make applications when conditions favor drift.
- Observe the following restrictions when applying in the vicinity of aquatic areas such as lakes, reservoirs, rivers, permanent streams, marshes or natural ponds and estuaries:
 - Do not apply within 100 feet of aquatic areas or sensitive areas listed below.
 - Maintain a 10 foot wide non-cultivated vegetative strip to prevent movement into bodies of water.

Disease Application Rate Table

TARGET DISEASE	FL. OZ. OF PRODUCT PER 1,000 SQ.FT.	PRODUCT PER ACRE	LB AI/A	APPLICATION INTERVAL	APPLICATION INFORMATION
Anthracnose (<i>Colletotrichum cereale</i>)	4 to 8 fl. oz.	1.36 to 2.72 gallons (5.5 to 11 quarts)	5.45 to 10.89 (PCNB)	14 - 21 Days	Initiate applications preventatively as conditions become favorable for disease development. Use the higher rate and shorter interval under high disease pressure. Reapply as needed. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.36 to 0.72 (tebuconazole)		
Brown Patch (<i>Rhizoctonia solani</i>)	6 to 8 fl. oz.	2.04 to 2.72 gallons (8 to 11 quarts)	8.17 to 10.89 (PCNB)	14 - 28 Days	Initiate applications preventatively as conditions become favorable for disease development. Use the higher rate and shorter interval under high disease pressure. Reapply as needed. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.54 to 0.72 (tebuconazole)		
Brown Ring Patch (<i>Waitea circinata</i> var. <i>circinata</i>)	6 to 8 fl. oz.	2.04 to 2.72 gallons (8 to 11 quarts)	8.17 to 10.89 (PCNB)	14 - 28 Days	Initiate applications at the early stage of symptom development or when conditions become favorable for disease development. Reapply as needed. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.54 to 0.72 (tebuconazole)		
Cool Season Brown Patch/ Yellow Patch (<i>Rhizoctonia cerealis</i>)	6 to 8 fl. oz.	2.04 to 2.72 gallons (8 to 11 quarts)	8.17 to 10.89 (PCNB)	21 - 28 Days	Make 1 to 2 applications when conditions are favorable for disease development. Use the higher rate and shorter interval under high disease pressure or for early-curative applications. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.54 to 0.72 (tebuconazole)		
Dollar Spot (<i>Sclerotinia homoeocarpa</i>)	6 to 8 fl. oz.	2.04 to 2.72 gallons (8 to 11 quarts)	8.17 to 10.89 (PCNB)	14 - 28 Days	Initiate applications preventatively as conditions become favorable for disease development. Use the higher rate and shorter interval under high disease pressure. Reapply as needed.
			0.54 to 0.72 (tebuconazole)		

TARGET DISEASE	FL. OZ. OF PRODUCT PER 1,000 SQ.FT.	PRODUCT PER ACRE	LB AI/A	APPLICATION INTERVAL	APPLICATION INFORMATION
					Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
Fairy Ring (caused by basidiomycete fungi)	6 to 8 fl. oz.	2.04 to 2.72 gallons (8 to 11 quarts)	8.17 to 10.89 (PCNB)	28 Days	Initiate applications preventatively in late winter/early spring when soil temperature averages 55-60° F over 5 days at a 2 inch depth. Water in the treatment to the depth at which fairy ring is present. Use the low rate when disease pressure is low. Use the high rate when disease pressure is high. Do not apply to overseeded bermudagrass during spring transition. Reapply as needed. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.54 to 0.72 (tebuconazole)		
Gray Leaf Spot (<i>Pyricularia grisea</i>)	6 to 8 fl. oz.	2.04 to 2.72 gallons (8 to 11 quarts)	8.17 to 10.89 (PCNB)	14 - 28 Days	Initiate applications preventatively as conditions become favorable for disease development. Use the higher rate and shorter interval under high disease pressure. Reapply as needed. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.54 to 0.72 (tebuconazole)		
Large Patch (Zoysia Patch) (<i>Rhizoctonia solani</i>)	6 to 8 fl. oz.	2.04 to 2.72 gallons (8 to 11 quarts)	8.17 to 10.89 (PCNB)	28 Days	Initiate applications preventatively in the fall and spring. Make 1 to 2 applications when conditions are favorable for disease development. Fall applications should be initiated when 2-inch depth soil temperatures are 72-75° F. Spring application should be made after approximately 50% green-up. Use the low rate when disease pressure is low and the high rate when disease pressure is high. Reapply as needed. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.54 to 0.72 (tebuconazole)		
Microdochium Patch (<i>Microdochium nivale</i>)	8 to 12 fl. oz.	2.72 to 4.08 gallons (11 to 16.3 quarts)	10.89 to 16.34 (PCNB)	28 Days	Initiate applications preventatively when the turf is moist and temperatures range from 32-65° F without snow cover. Use the higher rate when disease pressure is high. Reapply as needed. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.72 to 1.08 (tebuconazole)		
Necrotic Ring Spot (<i>Ophiosphaerella korrae</i>)	6 to 8 fl. oz.	2.04 to 2.72 gallons (8 to 11 quarts)	8.17 to 10.89 (PCNB)	28 Days	Initiate applications preventatively as conditions become favorable for disease development. Lightly water-in application to move fungicides into the crown and root zone. Reapply as needed. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.54 to 0.72 (tebuconazole)		

TARGET DISEASE	FL. OZ. OF PRODUCT PER 1,000 SQ.FT.	PRODUCT PER ACRE	LB AI/A	APPLICATION INTERVAL	APPLICATION INFORMATION
Pink Patch (<i>Limonomyces roseipellis</i>)	6 to 8 fl. oz.	2.04 to 2.72 gallons (8 to 11 quarts)	8.17 to 10.89 (PCNB)	14 - 28 Days	Initiate applications preventatively as conditions become favorable for disease development. Use the higher rate and shorter interval under high disease pressure. Reapply as needed. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.54 to 0.72 (tebuconazole)		
Red Thread (<i>Laetisaria fuciformis</i>)	6 to 8 fl. oz.	2.04 to 2.72 gallons (8 to 11 quarts)	8.17 to 10.89 (PCNB)	14 - 28 Days	Initiate applications preventatively as conditions become favorable for disease development. Use the higher rate and shorter interval under high disease pressure. Reapply as needed. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.54 to 0.72 (tebuconazole)		
Rust (<i>Puccinia</i> spp.)	6 to 8 fl. oz.	2.04 to 2.72 gallons (8 to 11 quarts)	8.17 to 10.89 (PCNB)	14 - 28 Days	Initiate applications preventatively as conditions become favorable for disease development. Use the higher rate and shorter interval under high disease pressure. Reapply as needed. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.54 to 0.72 (tebuconazole)		
Snow Mold, Gray (<i>Typhula</i> spp.) or Pink (<i>Microdochium nivale</i>)	8 to 12 fl. oz.	2.72 to 4.08 gallons (11 to 16.3 quarts)	10.89 to 16.34 (PCNB)	NA	Apply in late fall immediately prior to lasting snow cover. Use the higher rate in areas where snow cover may exceed three months or if the course has a history of infection by <i>Typhula ishikariensis</i> . Reapply as needed. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.72 to 1.08 (tebuconazole)		
Spring Dead Spot (<i>Ophiosphaerella korrae</i> , <i>O. herpotricha</i> , <i>Leptosphaeria korrea</i> , <i>L. namari</i>)	6 to 8 fl. oz.	2.04 to 2.72 gallons (8 to 11 quarts)	8.17 to 10.89 (PCNB)	28 Days	Initiate applications preventatively when soil temperature drops below 75° F at a 2-inch soil depth in the fall. Lightly water-in application to move fungicides into the crown and root zone. Reapply as needed. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.54 to 0.72 (tebuconazole)		
Summer Patch (<i>Magnaporthe poae</i>)	6 to 8 fl. oz.	2.04 to 2.72 gallons (8 to 11 quarts)	8.17 to 10.89 (PCNB)	14 - 28 Days	Initiate applications preventatively when soil temperature reaches 65° F at a 2-inch soil depth. Use adequate spray volume or water-in application to crowns and upper roots for optimum control. Use the higher rate and shorter interval under high disease pressure. Reapply as needed. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.54 to 0.72 (tebuconazole)		
Take-all Patch	6 to 8 fl. oz.	2.04 to 2.72	8.17 to 10.89 (PCNB)	14 - 28 Days	Initiate applications preventatively in

TARGET DISEASE	FL. OZ. OF PRODUCT PER 1,000 SQ.FT.	PRODUCT PER ACRE	LB AI/A	APPLICATION INTERVAL	APPLICATION INFORMATION
<i>(Gaeumannomyces graminis</i> var. <i>avenae</i>)		gallons (8 to 11 quarts)			the fall when soil temperature reaches 60-65° F at a 2-inch depth. Treat again in the spring when soil temperature reaches 55-60° F at a 2-inch depth. Water-in application to the upper root zone. Under high disease pressure, make two applications in the fall and spring at the high rate. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.54 to 0.72 (tebuconazole)		
Take-all Root Rot, Bermudagrass Decline, Warm Season Turfgrass Decline <i>(Gaeumannomyces graminis</i> var. <i>graminis</i>)	6 to 8 fl. oz.	2.04 to 2.72 gallons (8 to 11 quarts)	8.17 to 10.89 (PCNB)	28 Days	Initiate applications preventatively in the spring and fall. Make 1-2 applications before conditions become favorable for disease development. Apply before periods of stress, including hot, humid conditions or extended wet weather. Apply in adequate water volume or water-in application to upper root zone. Adhere to the RESTRICTIONS section of this label for maximum yearly application rates and maximum application numbers per year.
			0.54 to 0.72 (tebuconazole)		

Application Dilution Chart

APPLICATION VOLUME (GALLONS PER 1,000 SQUARE FEET)	APPLICATION RATE		QUARTS OF PREMION DILUTED TO THESE VOLUMES OF FINISHED SPRAY			
	FL.OZ. OF PRODUCT PER 1,000 SQFT	PRODUCT PER ACRE	25 GALLONS	50 GALLONS	100 GALLONS	200 GALLONS
1	4 fl. oz.	1.36 gallons (5.5 quarts)	3.125	6.25	12.5	25
	6 fl. oz.	2.04 gallons (8.2 quarts)	4.69	9.38	18.75	37.5
	8 fl. oz.	2.72 gallons (11 quarts)	6.25	12.5	25	50
	12 fl. oz.	4.08 gallons (16.3 quarts)	9.375	18.75	37.5	75
2	4 fl. oz.	1.36 gallons (5.5 quarts)	1.56	3.125	6.25	12.5
	6 fl. oz.	2.04 gallons (8.2 quarts)	2.34	4.69	9.38	18.75
	8 fl. oz.	2.72 gallons (11 quarts)	3.125	6.25	12.5	25
	12 fl. oz.	4.08 gallons (16.3 quarts)	4.7	9.4	18.75	37.5
3	4 fl. oz.	1.36 gallons (5.5 quarts)	1.04	2.08	4.2	8.3
	6 fl. oz.	2.04 gallons (8.2 quarts)	1.56	3.12	6.3	12.45

	8 fl. oz.	2.72 gallons (11 quarts)	2.08	4.2	8.3	16.7
	12 fl. oz.	4.08 gallons (16.3 quarts)	3.125	6.25	12.5	25
4	4 fl. oz.	1.36 gallons (5.5 quarts)	0.78	1.56	3.125	6.25
	6 fl. oz.	2.04 gallons (8.2 quarts)	1.17	2.34	4.69	9.38
	8 fl. oz.	2.72 gallons (11 quarts)	1.56	3.125	6.25	12.5
	12 fl. oz.	4.08 gallons (16.3 quarts)	2.34	4.7	9.4	18.75

MIXING AND CHEMICAL COMPATIBILITY INFORMATION

Use clean and properly calibrated spray equipment. Follow the recommendations of your State Cooperative Extension Service, consultant or pest control advisor for tank-mixing with other products. To tank-mix, add one half of the necessary volume of water to the spray or mixing tank and start agitation. Add PREMION and tank-mix partner products to the tank in the following order: 1) water-soluble packets (wait for packets to completely dissolve); 2) wettable powders and water-dispersible granular products; 3) PREMION and other liquid flowables or suspension concentrates; 4) emulsifiable concentrates; and 5) water soluble fertilizers, such as AMS or UAN, and other spray additives. Complete tank filling by adding water to achieve the desired final volume. Maintain agitation throughout the application. Do not allow the spray mixture to remain in the tank overnight or for long periods of time during the day without agitation.

PREMION is compatible with most commonly used turf fungicide, insecticide, herbicide, plant growth regulator and foliar nutrient products. However, the physical compatibility of PREMION with all potential tank-mix partners has not been investigated. If tank-mixing with other products is desired, conduct a jar test with a small volume of the same proportion of water and pesticides being considered for turfgrass application. Pour the appropriate quantity of water in a small jar and add the proportionate amounts of products in the following order: 1) wettable powders and water-dispersible granular products; 2) PREMION and other liquid flowables or suspension concentrates; and 3) emulsifiable concentrates; and 4) water soluble fertilizers, such as AMS or UAN, and other spray additives. After mixing thoroughly, let the mixture stand for at least 15 minutes then observe for signs of separation, globules, sludge, flakes or other precipitates. Physical compatibility is confirmed if the combination remains mixed or can be remixed readily by shaking lightly.

Tank-mixtures of PREMION with other pesticides registered for use on golf courses must be applied in accordance with the most restrictive of label restrictions, limitations and precautions. No label application rates may be exceeded. This product cannot be mixed with any product with a label prohibition against such mixing. When tank-mixing with other products, it is the responsibility of the end-user/applicator to ensure that the tank-mix partner is registered in the state where the application is being made. Not all products are registered in all states; please verify state registration of all tank-mix products in your state before selling, distributing or using.

SPRAY ADDITIVES: Use of spray additives such as spreaders, stickers, extenders, trace elements or fertilizers should be evaluated on a small scale before widespread applications are made to turf areas. The label directions for use provided here are based on data obtained with no additives and the use of these products with PREMION may affect the results. Contact local university extension service personnel or an AMVAC representative before using spray additives with PREMION.

RESISTANCE MANAGEMENT

The active ingredients in PREMION belong to the Sterol Inhibitor or Demethylation Inhibitor (FRAC Group 3) and aromatic hydrocarbon (FRAC Group 14) classes of chemistry. To maintain the long-term effectiveness of PREMION, it should be incorporated into seasonal turfgrass disease management programs that utilize as many modes of action as possible to control target diseases. Turfgrass agronomic and cultural practices that reduce overall disease

pressure are a critical component of resistance management. Contact your local university cooperative extension service personnel for information on fungicide resistance management in turf.

SPRAY DRIFT MANAGEMENT

Application equipment and weather affect spray drift. Consider all factors when making application decisions. Where states have more stringent regulations, they must be observed when applying PREMION. Avoiding spray drift is the responsibility of the applicator or turfgrass manager. To reduce the potential for drift, the application equipment must be adjusted to produce medium to large droplets (i.e., ASAE Standard 572) with corresponding spray pressure. Use high flow rate nozzles to apply the highest practical spray volume, using the appropriate droplet size to ensure adequate turf canopy distribution, coverage and penetration. With most nozzle types, narrower spray angles produce larger droplets. Follow the nozzle manufacturer's directions on pressure, orientation, spray volume, etc., to minimize drift and optimize coverage and control.

WIND: Make applications when wind velocity favors on-target deposition (approximately 3 to 10 mph). Avoid making applications when spray particles may be carried by air currents outside the targeted treatment area. Do not apply when wind velocity exceeds 15 mph. Avoid applications when wind gusts approach 15 mph. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area. Always make applications when there is some air movement to determine the direction and distance of possible spray drift. Local terrain may influence wind patterns. The applicator should be familiar with local conditions and understand how they may impact spray drift. Boom or nozzle shielding can reduce the effects of wind or air currents on drift. Verify that shields do not interfere with uniform deposition of product before application.

TEMPERATURE AND HUMIDITY: High temperatures and/or low humidity increase the evaporation rate of spray droplets and therefore the likelihood of spray drift. Avoid spraying during high temperature and/or low humidity conditions.

TEMPERATURE INVERSION: A surface temperature inversion (i.e., increasing air temperature with increasing altitude) greatly increases the potential for drift. Do not apply during a temperature inversion. Avoid application when conditions are favorable for the formation of an inversion. Presence of ground fog is a good indicator of a surface temperature inversion. The applicator may detect the presence of an inversion by producing smoke and observing whether a smoke layer forms near the ground surface.

SENSITIVE AREAS: Sensitive areas for PREMION are defined as bodies of water (ponds, lakes, rivers and streams), wetlands, habitats for endangered species and agricultural crop areas. Applicators must take all necessary precautions to keep spray drift from reaching sensitive areas.

TURFGRASS TOLERANCE

Apply to turfgrass that is well established, actively growing and not under excessive heat or moisture stress or drought stress. Use PREMION in accordance with label use instructions on:

- All cool-season turfgrasses such as bentgrasses, bluegrasses, fescues, ryegrasses and mixtures thereof.
- Warm-season grasses such as St. Augustinegrass, seashore paspalum, kikuyugrass and zoysiagrass.

Tank-mixing PREMION with a pigment containing product will provide an added measure of turf tolerance and will enhance overall turf quality. Colonial bentgrass is generally more vulnerable to injury than is creeping bentgrass. Bermudagrasses tolerate applications of PREMION when daily temperatures do not exceed 85° F immediately before or after application. Avoid application to bermudagrass during spring transition and ensure that complete green-up has occurred to avoid any potential growth inhibition.

The turf safety of PREMION, both applied alone and in combination with all potential tank-mix partners, has not been tested on all turfgrass species and varieties under varying agronomic practices and environmental conditions. Before making widescale applications of PREMION, a small area should be treated and observed for at least one week after application to ensure turf safety under local conditions.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep container closed when not in use. In case of spill or leak on floor or paved surfaces, soak up with sand, earth or synthetic absorbent. Remove to chemical waste area.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. 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. Do not reuse or refill this container.

For containers 5 gallons in size or smaller:

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 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.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For containers larger than 5 gallons:

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use, subject to the inherent risks referred to herein, when it is used in accordance with such directions; and (c) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH

DAMAGES ARE CLAIMED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW MANUFACTURER OR SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

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AMVAC Chemical Corporation
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FFIII



F U N G I C I D E

Broad spectrum snow mold fungicide combining multiple modes of systemic and contact modes of action

Active Ingredients:

Propiconazole (CAS No. 60207-90-1) 0.62%
 Chlorothalonil (CAS No. 1897-45-6) 3.90%
 Pentachloronitrobenzene (PCNB) (CAS No. 82-68-8) 7.50%

Other Ingredients: 87.98%

Total: 100.00%

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID	
If in eyes:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contacts, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
Note to Physician: If ingested, induce emesis or lavage stomach. Treat symptomatically. Persons having an allergic reaction respond to treatment with antihistamines or steroid creams and/or systemic steroids.	
EMERGENCY INFORMATION	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY: For Medical Emergencies phone:.....1-888-681-4261 For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC® ...1-800-424-9300 For Product Use Information phone: AMVAC®1-888-462-6822	

EPA Reg. No. 5481-614
 EPA Est. No.

SGN 75 Net Weight: XX lbs.



AMVAC Chemical Corporation 4100 E. Washington Blvd.
Los Angeles, CA 90023 U.S.A.
1-888-462-6822

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Personal Protective Equipment (PPE)

Some materials that are chemical resistant to this product are listed below.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride (PVC), or Viton®. Do not handle or apply product with bare hands.
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, 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.
- Users should remove clothing/PPE immediately if pesticide gets inside, then wash thoroughly and put on clean clothing.
- Users should 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 fish, aquatic organisms, aquatic invertebrates and wildlife. Cover, collect, or incorporate spilled granules. Do not apply directly adjacent to potable water supplies. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

This product contains chlorothalonil, a chemical known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

This chemical can contaminate surface water through drift. Under some conditions, it may also have a high potential for runoff into surface water for several days to weeks after application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow ground water, areas with infield canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

DIRECTIONS FOR USE

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

PRODUCT INFORMATION

This product is a preventive fungicide labeled for control of certain soil borne diseases on golf course tees, greens and fairways. Best results are achieved when used in a preventive program following specified rate and application directions. Carefully read, understand and follow label directions.

Restrictions

- 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.
- Do not make more than one application at the HIGH rate 289 lbs. product/acre (6.6 lbs./1,000 sq. ft.) per year except for golf course greens and tees. Repeat applications at the HIGH rate on greens and tees must not be made sooner than 14 days. Repeat applications at the LOW rate (145 lbs. product/acre) per year must not be made sooner than 14 days.
- Do not apply more than 1,161 lbs. of product/acre (26.65 lbs./1,000 sq. ft.) per year on golf course greens and tees (7.2 lbs. of propiconazole/acre); and 667 lbs. of product per acre/year on golf course fairways (26 lbs. chlorothalonil/acre).
- If tank-mixing or sequentially applying with other products that contain these active ingredients, no more than 7.2 lbs. of propiconazole per acre per year can be applied to golf course turf, and no more than 26 lbs. chlorothalonil per acre can be applied to golf course fairways.
- This product may not be applied within 25 feet (ground application) of marine/estuarine water bodies unless there is an untreated buffer area of that width between the area to be treated and the water body.
- Application with a chest-mounted rotary spreader (belly-grinder) is prohibited.
- Use of this product is prohibited on
 - golf course roughs;
 - sod farms, and industrial parks and professional and college athletic fields where turf is grown;
 - residential sites including lawns, yards and ornamental plants and gardens around homes and apartments;
 - grounds around day care facilities;
 - school yards;
 - parks;
 - playgrounds; and
 - athletic fields
- May only be used on golf course greens, tees and fairways.
- Do not graze treated areas or feed clippings to livestock.
- Use of any hand held application equipment is prohibited.
- Aerial application is prohibited.
- Apply using tractor drawn equipment only.
- Do not enter or allow others to enter treated area until treated area has been irrigated and turf has dried.

TURF

This product is a fungicide for the prevention and control of certain soil borne diseases on golf course tees, greens and fairways.

For best results use this product as a preventive application before diseases appear; however, if you do not apply as a preventive treatment, then apply this product at first sign of disease.

Following application, water areas treated with this product in order to move material down to the soil level. If treated area is subjected to flooding or unusually heavy rainfall, or if disease is severe or reappears, treat the area again.

Under certain growing conditions, a temporary discoloration of the grass may occur. This causes no harm and will disappear in a short time.

Use and rate directions for golf course greens, tees and fairways*

Disease	Lbs. per 1,000 sq. ft.	Lbs. per Acre	Application Timing	Instructions
Gray Snow Mold <i>Typhula</i> <i>ishikariensis</i> , <i>incarnata</i>	6.6	289	Late Fall	Apply one application in the late Fall before snow cover. Do not apply on top of snow. If snow melt occurs, make a repeat application 4 to 8 weeks or later after first application, depending on timing of snow melt. Application must be followed by ¼ inch of irrigation water or rainfall on day of application. If sufficient rainfall does not occur on day of application then the treated area must be irrigated with ¼ inch of water on day of application.

(Continued)

Disease	Lbs. per 1,000 sq. ft.	Lbs. per Acre	Application Timing	Instructions
Pink Snow Mold <i>Microdochium nivale</i> (with snow cover)	3.33 - 6.6	145 - 289	Late Fall	Apply one application in the late Fall before snow cover. Do not apply on top of snow. If snow melt occurs, make a repeat application 4 to 8 weeks or later after first application, depending on timing of snow melt. Application must be followed by ¼ inch of irrigation water or rainfall on day of application. If sufficient rainfall does not occur on day of application then the treated area must be irrigated with ¼ inch of water on day of application.
Microdochium Patch <i>Microdochium nivale</i> (without snow cover)	3.33 - 6.6	145 - 289	Fall - Late Winter	In the absence of snow cover, application can be applied at 4 to 6 week intervals to maintain control. Use the lower rate with the shorter interval. After application immediately irrigate with 1/4 inch water.

*Maximum Application Rate = 1.79 lbs. propiconazole a.i./A,

Maximum Annual Application Rate = 7.2 lbs. propiconazole a.i./A per year.

SPREADER SETTINGS				
These spreader settings are not intended to replace calibration.				
Calibrate your spreader before applying product.				
30 lbs. treats 9,000 sq. ft. at the 145 lbs. product/acre – LOW RATE (3.33 lbs./1,000 sq. ft. rate)				
30 lbs. treats 4,400 sq. ft. at the 289 lbs. product/acre – HIGH RATE (6.6 lbs./1,000 sq. ft. rate)				
SPREADER	GROUND SPEED	WIDTH OF COVERAGE	SPREADER SETTINGS	
			LOW RATE	HIGH RATE
Al/Acre (propiconazole, chlorothalonil, PCNB)			0.90, 5.66, 10.89	1.79, 11.33, 21.78
Andersons (tractor drawn) PowerPro 2000 (cone 9)	3 mph	9 feet	K	M
Andersons SSD/SS-2 Drop (tractor drawn)	3 mph	Overlap wheels	3 ¾	5 ¼
Lely Models WTR, WFR, HR, 1250 (PTO at 450 rpm) (Pattern III-A)	3 mph	30 feet	4	5 ¼
Vicon (03 Series)	3 mph	24 feet	14	21

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a clean, dry place. Reseal opened bag by folding top down and securing. Cover, collect or incorporate spilled granules.

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

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; and (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

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