

WISDOM[®] LAWN GRANULAR

INSECTICIDE

For sale to, use, and storage by commercial applicators for use to control Ants (including Imported Fire Ants), Mole Crickets and other insect pests on lawns in landscaped areas and perimeters around residential, institutional, public, commercial and industrial buildings, parks, recreational areas, and athletic fields.

Optional or Alternate Wording: Treats up to 5,000 sq. ft.

ACTIVE INGREDIENT:	By Weight
Bifenthrin*	0.2%
OTHER INGREDIENTS	99.8%
TOTAL	100.0%

**Cis isomers 97% minimum, trans isomers 3% maximum.*

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

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.
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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

This product is a pyrethroid. If large amounts have been ingested, milk, cream and other digestible fats and oils may increase absorption and so should be avoided.

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

EPA Reg. No. 5481-521
EPA Est. No. 39578-TX-1

Net Contents:
 As Marked on Container

Made in U.S.A.



PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic invertebrates.

Do not apply when weather conditions favor drift from treated areas. Drift and run-off from treated areas may be hazardous to aquatic organisms in neighboring areas.

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Sweeping any product that lands on a driveway, sidewalk, or street, back onto the treated area of the lawn or garden will help to prevent run off to water bodies or drainage systems.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Not for use on plants

being grown for sale of other commercial use, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climate modification and being grown in interior plantscapes, ornamental gardens or parks, or lawns or grounds.

Do not apply more than 0.2 lb. active ingredient (a.i.) per acre per application on residential use sites (i.e., around

private homes, apartment buildings, condominiums, non-agricultural outbuildings, non-commercial greenhouses,

pre-schools or day care facilities). May be applied at up to 0.4 lb. a.i. per acre per application on non-residential use sites (i.e., around institutional, public, commercial or industrial buildings; parks; recreational areas or athletic fields).

Do not broadcast apply more than 0.4 lbs. A.I. (200 lbs. WISDOM LAWN GRANULAR INSECTICIDE) per acre per year.

Apply this product directly to the lawn or garden area. Water treated area as directed on this label. Do not water to the point of run-off. Do not make applications during rain.

Not for use on golf courses, sod farms, nurseries, in commercial greenhouses or on grass grown for seed.

LAWN AND PERIMETER APPLICATIONS

LAWN APPLICATION: Broadcast WISDOM LAWN GRANULAR INSECTICIDE with suitable application equipment to ensure uniform coverage over the treatment area.

APPLICATION RATES

The application rates listed in the following table will provide excellent control of the respective pests under typical conditions. However, at the discretion of the applicator, WISDOM LAWN GRANULAR INSECTICIDE may be applied at up to 0.4 lb a.i./Acre to control each of the pests listed in this Table. For residential lawn use, do not apply more than 0.2 lbs. a.i. per acre per application.

PEST	ACTIVE INGREDIENT LBS. PER ACRE	APPLICATION RATE WISDOM LAWN GRANULAR INSECTICIDE	
Armyworms ¹ Cutworms ¹ Sod Webworm ¹	0.1 lbs. a.i./A	50 lbs. per acre	1.15 lbs. per 1000 sq. ft.
Annual Bluegrass Weevil (<i>Hyperodes</i>) (Adult) ² Billbugs (Adult) ³ Black Turfgrass Ataenius (Adult) ⁴ Leafhoppers Mealybugs	0.1 – 0.2 lbs. a.i./A	50 - 100 lbs. per acre	1.15 – 2.3 lbs. per 1000 sq. ft.
European Crane Fly	0.15 – 0.3 lbs. a.i./A	75 – 150 lbs. per acre	1.75 – 3.50 lbs. per 1000 sq. ft.
Ants Centipedes Chinch Bugs ⁵ Fleas (Larvae) ⁶ Fleas (Adults) Imported Fire Ants (Adult) ⁷ Imported Fire Ants (Mounds) ⁷ Millipedes Mole Cricket (Adult) ⁸ Mole Cricket (Nymph) ⁹ Ticks ¹⁰	0.2 – 0.4 lbs. a.i./A	100 – 200 lbs. per acre	2.3 – 4.6 lbs. per 1000 sq. ft.
Pillbugs Sowbugs	0.4 lbs. a.i./A	200 lbs. per acre	4.6 lbs. per 1000 sq. ft.

In New York State, this product may NOT be applied to any grass or turf area within 100 feet of a water body (lake, pond, river, stream, wetland, or drainage ditch).

In New York State, do not make a single repeat application of Wisdom Lawn Granular Insecticide if there are signs of renewed insect activity, but not sooner than two weeks after the first application.

COMMENTS

¹Armyworms, Cutworms, and Sod Webworms: To ensure optimum control, irrigate the treated area with up to 0.1 inches of water immediately after application to activate (release from the granule) the insecticide.

²Annual Bluegrass Weevil (*Hyperodes*) adults: Applications should be timed to control adult weevils as they leave their overwintering sites and move into grass areas. This movement generally begins when *Forsythia* is in full bloom and concludes when flowering dogwood is in full bloom. Consult your State Cooperative Extension Service for more specific information regarding application timing.

³Billbugs: Applications should be made when adult billbugs are first observed during April and May. Degree day models have been developed to optimize application timing. Consult your State Cooperative Extension Service for

information specific to your region. In temperate regions, spring applications targeting billbug adults will also provide control of over-wintered chinch bugs.

⁴Black Turfgrass Ataenius adults: Applications should be made during May and July to control the first and second generation of black turfgrass ataenius adults, respectively. The May application should be timed to coincide with the full bloom stage of Vanhoutte spiraea (*Spiraea vanhouttei*) and horse chestnut (*Aesculus hippocastanum*). The July application should be timed to coincide with the blooming of Rose of Sharon (*Hibiscus syriacus*).

⁵Chinch Bugs: Chinch bugs infest the base of grass plants and are often found in the thatch layer. Irrigate the treated area with up to 0.25 inches of water immediately after application to activate (release from the granule) the insecticide. Chinch bugs can be one of the most difficult pests to control in grasses and the higher application rates may be required to control populations that contain both nymphs and adults during the summer.

⁶Flea larvae: Flea larvae develop in the soil of shaded areas that are accessible to pets or other animals. Irrigate the treated area with up to 0.5 inches of water immediately after application to activate (release from the granule) the insecticide.

⁷Imported Fire ants: Control will be optimized by combining broadcast applications that will control foraging workers and newly mated fly-in queens with mound drenches that will control existing colonies. If the soil is not moist, then it is important to irrigate before application. Broadcast treatments should apply up to 0.4 lb a.i./A. Mounds should be treated by diluting 1 teaspoon of Wisdom TC Flowable (EPA Reg. No. 5481-520) formulation per gallon of water and applying 1 to 2 gallons of finished spray per mound. The mounds should be treated with sufficient force to break their apex and allow the insecticide solution to flow into the ant tunnels. A four-foot diameter circle around the mound should also be treated. For best results, apply in cool weather (65 – 80° F) or in early morning or late evening hours.

Note: A spray rig that is calibrated to apply 0.1 lb a.i./A (20 ozs.) of Wisdom TC Flowable (EPA Reg. No. 5481-520) in 2.5 gallons per 1,000 square feet contains the approximate dilution (1 teaspoon per gallon) that is required for fire ant mound drenches in the spray tank. *Application of 125 lbs/acre of WISDOM LAWN GRANULAR INSECTICIDE will provide six months residual activity for control of foraging imported Fire Ants and newly mated fly-in queens. *Not applicable in California.

⁸Mole Cricket adults: Achieving acceptable control of adult mole crickets is difficult because preferred grass areas are subject to continuous invasion during the early spring by this extremely active stage. Applications should be made as late in the day as possible and should be watered in with up to 0.5 inches of water immediately after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized. Grass areas that receive pressure from adult mole crickets should be treated at peak egg hatch to ensure optimum control of subsequent nymph populations (see below).

⁹Mole Cricket nymphs: Grass areas that received intense adult mole cricket pressure in the spring should be treated immediately prior to peak egg hatch. Optimal control is achieved at this time because young nymphs are more susceptible to insecticides and they are located near the soil surface where the insecticide is most concentrated. Control of larger, more damaging, nymphs later in the year may require both higher application rates and more frequent applications to maintain acceptable control. Applications should be made as late in the day as possible and should be watered in with up to 0.5 inches of water immediately after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized.

¹⁰**Ticks:** Do not make spot applications. Treat the entire area where exposure to ticks may occur. Use higher application rates when treating areas with dense ground cover or heavy leaf litter. Ticks may be reintroduced from surrounding areas on host animals. Retreat as necessary to maintain adequate control. Do not allow public use of treated areas during application.

Deer Ticks (*Ixodes sp.*) have a complicated life cycle that ranges over a two year period and involves four life

stages. Applications should be made in mid to late spring to control larvae and nymphs that reside in the soil and leaf litter.

American dog ticks may be a considerable nuisance in suburban settings, particularly where homes are built on land that was previously field or forest. These ticks commonly congregate along paths or roadways where humans are likely to be encountered. Applications should be made as necessary from mid-spring to early fall to control American dog tick larvae, nymphs and adults.

PERIMETER APPLICATION

Apply to ground area 5 to 10 feet wide around and adjacent to the structure.

Boundary Applications: Apply to soil areas, ornamental gardens, pavement crevices, fencelines, planter areas, vegetation areas and mulch areas.

Appl. Rate: Pounds Per 1,000 sq. ft.	Band Width In Feet	Pounds of WISDOM LAWN GRANULAR INSECTICIDE for Perimeter Applications Linear Distance (Feet) Around Structure							
		100	150	200	250	300	400	500	1,000
2.3	5	1.3	1.9	2.5	3.0	3.6	4.8	5.9	11.7
2.3	10	3.0	4.2	5.3	6.5	7.6	9.9	12.2	23.7
3.0	5	1.7	2.5	3.3	3.9	4.7	6.3	7.7	15.2
3.0	10	3.9	5.4	6.9	8.5	9.9	12.9	15.9	30.9
3.5	5	2.0	2.9	3.8	4.5	5.4	7.2	8.9	17.5
3.5	10	4.5	6.3	8.0	9.8	11.4	14.9	18.3	35.5
4.6	5	2.6	3.8	5.0	6.0	7.2	9.6	11.8	23.4
4.6	10	6.0	8.4	10.6	13.0	15.2	19.8	24.4	47.4

NOTE: The amounts of WISDOM LAWN GRANULAR INSECTICIDE listed in the above table are based on the total area being treated. This area is determined by multiplying the linear distance by the band width and then adding to that value the area of a circle whose radius is equal to the band width (to account for the area treated at the four corners of a rectangular structure).

FIRE ANT MOUND TREATMENT: Apply 1/2 cup of WISDOM LAWN GRANULAR INSECTICIDE per mound and then drench the mound with 1 to 2 gallons of water. The mound should be drenched with sufficient force to break its apex and allow the insecticide to flow into the ant tunnels. For best results, apply in cool weather (65 to 80° F) or in early morning or late evening hours. Treat new mounds as they appear. Food utensils such as teaspoons and measuring cups should not be used for food purposes after use with insecticide.

INDUSTRIAL NON-AGRICULTURAL APPLICATIONS

(Including Industrial Sites, Parks, Ball Fields and Cemeteries)

BROADCAST SPOT APPLICATIONS: For the control of actively foraging ants (including Imported Fire Ants) broadcast uniformly 2.3 to 4.6 lbs. WISDOM LAWN GRANULAR INSECTICIDE per 1000 sq. ft. (0.2 to 0.4 lbs. a.i./Acre). See comments section under Lawn & Perimeter Applications for additional rate directions.

PAD MOUNTED ELECTRICAL SITES: To reduce or prevent ant mound building activity on electrical pads, uniformly distribute 1.0 to 1.5 Tablespoons (0.06 to 0.09 lbs.) of WISDOM LAWN GRANULAR INSECTICIDE per 4 sq. ft. of mounting pad. Where existing transformers are completely or partially filled with soil excavated by resident Ants, remove any excess fill and level the remaining soil prior to application.

NOTE: Electrical transformers appear to be more attractive to ants during the cooler months. For best results, treat in the Fall or early Spring.

SPECIMEN

WISDOM LAWN GRANULAR INSECTICIDE –Spreader Settings for Broadcast Applications

EQUIPMENT	GROUND SPEED (MPH)	SPREADER SETTING			
		100 POUNDS PER ACRE		200 POUNDS PER ACRE	
		ONCE OVER	TWICE OVER	ONCE OVER	TWICE OVER
Hand-Pushed					
LESCO Rotary	3	B + 1/4	A + 1/2	C + 1/2	B + 1/4
Scotts R-8A-1 Rotary	3	G	E	Not Rec.	G
Gandy Models (42, 36, 30, 24)	3	12	10.5	16	12
Spyker (all Models)	3	2.6	2	3.1	2.6
Equipment Drawn (PTO=540 RPM)					
Gandy Models (42, 36, 30, 24)	4.5	14	11.5	19	14
Gandy 6500 Series	4.5	15	11	20	15
Gandy 10T Series	5.0	16.5	12	24	16.5
Herd GT-77	4.0	-	-	8-H	-
Herd GT-77	8.0	8-H	-	-	8-H
Lely 2.3202.000.1	4.5	2	1	3.5	2
Lely Model L-400	4.5	Not Rec.	Not Rec.	2	Not Rec.
Vicon PS402	4.5	10	7	16	10
Vicon PS1002T	4.5	13	9	21	13

Optional or Alternate Spreader Settings

Spreader Settings for Broadcast Applications		
Spreader Make and Model	Setting To Deliver	
	2.3 lbs. Per 1,000 sq. ft.	3.5 lbs. Per 1,000 sq. ft.
<i>Spyker (all models)</i>	4.7	5
<i>Earthway Drop 7300B</i>	16	17
<i>Republic/Scotts Broadcast</i>	3	4
<i>Republic/ Scotts Drop</i>	6	7
<i>Precision Drop FH-22D</i>	9	10
<i>Precision Broadcast/Red Devil</i>	12	13
<i>Scott Speedy Green</i>	3	4.5
<i>Broadcast/Earthway 2850</i>	14	15
<i>Broadcast/Earthway 2800A</i>	14	15
<i>Broadcast/Earthway 2050 S.U.</i>	14	15

NOTE: These settings should be used as starting points when calibrating a spreader to achieve the desired application rate of WISDOM LAWN GRANULAR INSECTICIDE.

After calibration, the technician should regularly observe the amount of WISDOM LAWN GRANULAR INSECTICIDE that is applied to a known area and make further setting adjustments, as necessary, to maintain the appropriate application rate. Spreaders should be calibrated periodically to ensure that equipment wear or other

factors have not altered the flow rate of WISDOM LAWN GRANULAR INSECTICIDE. Calibration instructions are included in the Owner's Manual that was provided by the equipment manufacturer at the time of purchase.

RESISTANCE: Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state pest management authorities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and suspect that resistance is a reasonable cause, immediately consult your local company representative or pest management advisor for the best alternative method of control for your area.

Dealers Must Sell in Original Packages Only.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use close tightly.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call Chemtrec 1-800-424-9300.

To confine spill: Cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

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

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container.

Paper and plastic bags: Completely empty bag into application equipment. When completely empty, offer for recycling, if available or 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; (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.

Wisdom is a trademark of AMVAC Chemical Corporation.

AMVAC Chemical Corporation

4100 E. Washington Boulevard

Los Angeles, CA 90023 U.S.A.

1-888-462-6822

SPECIMEN

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: WISDOM®GC Granular; WISDOM® Nursery Granular Insecticide; WISDOM® Lawn Granular Insecticide; WISDOM® EZ; WISDOM® EZ Golf Course

GENERAL USE: Pyrethroid type insecticide/miticide

PRODUCT DESCRIPTION: Tan, solid granule with a slightly musty odor

MOLECULAR FORMULA: C₂₃H₂₂ClF₃O₂ (Bifenthrin)

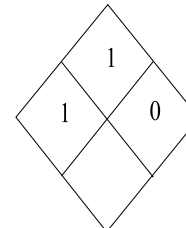
EPA Registration Number: 5481-518; 5481-522; 5481-521

MSDS No.: 318_7

Current Revision Date: 29 April, 2011

MANUFACTURER:
AMVAC CHEMICAL CORPORATION
4100 E. Washington Blvd.
Los Angeles, CA 90023-4406
Ph: 323-264-3910
FAX: 323-268-1028

EMERGENCY TELEPHONE NUMBERS:
MANUFACTURER: 323-264-3910
TRANSPORTATION (24 HOURS)
CHEMTREC: 800-424-9300
OTHER (24 HOURS)
AMVAC: 323-264-3910



2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Wt%	Hazard(s)	PEL/TLV
Bifenthrin	82657-04-3	0.2	None	None
Other Ingredients (May include trace amounts of crystalline silica, quartz) and wood dust	14808-60-7 9004-34-6	99.8 trace trace	Silicosis Carcinogen	0.1 mg/m ³ (OSHA) 0.05 mg/m ³ (ACGIH)

WISDOM is a registered trademark of AMVAC Chemical Corporation.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

CAUTION! Causes eye irritation. Causes skin irritation. Do not get in eyes, on skin, or on clothing. Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing vapors or spray mist. Use with adequate ventilation. Do not contaminate feed or foodstuffs.

KEEP OUT OF REACH OF CHILDREN.

Highly Toxic to fish and aquatic organisms. Keep out of bodies of water.

3. HAZARDS IDENTIFICATION, cont'd

POTENTIAL HEALTH EFFECTS

ROUTE(S) OF ENTRY: Typical routes of exposure are swallowing, inhalation, or coming into contact with the skin.

SIGNS OF ACUTE OVEREXPOSURE: Symptoms of overexposure may include tremors, convulsions, incoordination, decreased locomotion and nasal discharge, including bleeding. In addition, contact with Bifenthrin may occasionally produce skin sensations such as rashes, numbing, burning or tingling. These skin sensations are reversible and usually subside within 12 hours.

SIGNS OF CHRONIC OVEREXPOSURE: Same as acute.

OTHER POTENTIAL HEALTH EFFECTS: Bifenthrin has produced an increased incidence of urinary bladder tumors in male mice at the highest dose level tested. This response however was considered equivocal and not evidence of a clear compound related effect. EPA has classified Bifenthrin as a class C carcinogen, a possible human carcinogen. Respirable crystalline silica is listed as being carcinogenic by both IARC and NTP. It is present at less than 0.01% in the product. Wood dust is listed by IARC as a potential carcinogen and by NTP as a known carcinogen.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None presently known.

CARE SHOULD BE EXERCISED IN HANDLING THIS PRODUCT.

4. FIRST AID MEASURES

EYES: Immediately flush the eyes with copious amounts of clear, cool running water for a minimum of 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. Contact a physician if irritation occurs and persists.

INHALATION: Remove victim to fresh air. If breathing has ceased, clear the victim's airway and start artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Contact a physician immediately.

INGESTION: Induce vomiting by giving two glasses of water and sticking a finger down throat or giving syrup of ipecac. Never give anything by mouth to an unconscious person. Contact a physician immediately.

SKIN: Remove contaminated clothing. Wash thoroughly with soap and clean water. If a rash or any of the symptoms of acute exposure appear, contact a physician immediately.

4. FIRST AID MEASURES, cont'd

NOTE TO PHYSICIANS: Although this product has a low toxicity if swallowed and has low dermal toxicity. Bifenthrin technical is moderately toxic if swallowed. This product may be slightly irritating to the skin and practically non-irritating to the eyes. Gastric lavage using an endotracheal tube may be preferred to vomiting. Reversible skin sensations (paresthesia) may occur and ordinary skin salves have been found useful in reducing discomfort. Treatment is otherwise controlled by removal of exposure followed by symptomatic and supportive care. Contact your local poison control center for more medical information.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

Flash Point: >212°F/100°C (TCC)

Autoignition Temperature: Not determined

Flammable Limits:

Lower flammable limit: Not determined

Upper flammable limit: Not determined

EXPLOSIVITY:

Mechanical Impact: Not expected to be explosive under mechanical impact conditions.

Static Discharge: Not expected to be explosive.

HAZARDOUS COMBUSTION PRODUCTS: Slightly combustible, and may support combustion at elevated temperatures. This product may emit hazardous fumes of hydrogen chloride, hydrogen fluoride, carbon oxides, and unidentified organic compounds when it is heated excessively or burned. **WEAR SELF-CONTAINED BREATHING APPARATUS.**

EXTINGUISHING MEDIA: Water spray, dry chemical, foam, or carbon dioxide.

FIRE FIGHTING INSTRUCTIONS: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapors generated.

6. ACCIDENTAL RELEASE MEASURES

GENERAL: Thoroughly ventilate area. Wear appropriate personal protective equipment (See Section 8 or the label). Keep unauthorized personnel out of the area.

SMALL SPILL: Isolate area to prevent contamination of water bodies. Place in covered containers. Clean area first with an alcoholic caustic or soda ash solution, then follow with soap and water. The cleaning solutions are also hazardous wastes.

6. ACCIDENTAL RELEASE MEASURES, cont'd

LARGE SPILL: Dike or otherwise isolate the spill area to prevent contamination of water bodies. Sweep or vacuum the spilled solids into a closed container, taking care not to create dusting conditions. Use the recovered material according to label directions or discard as a hazardous waste. If water is used to aid in the cleanup, absorb any liquid on clay, sand, etc. and place absorbed liquid into a hazardous waste container. Clean the spill area first with an alcoholic caustic or soda ash solution, then follow with soap and water. The cleaning solutions are also hazardous wastes.

7. HANDLING AND STORAGE

HANDLING: Keep this product cool and dry. Keep container closed. Store away from feed, food, and drink. Keep away from children and pets. Wash thoroughly after handling this product. Make certain containers are grounded to prevent static buildup and discharge.

STORAGE: Store product in its original container in a cool, dry, locked place out of the reach of children. Store away from sources of heat and ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: General air replacement or dilution ventilation is sufficient for material handling and storage, but local ventilation should be used when removing this product from containers.

RESPIRATORY PROTECTION: Under normal use conditions no respiratory protection is required. If local ventilation is not available when the containers are opened, it is recommended that a NIOSH/MSHA-approved dust/mist filtering respirator or its international equivalent be worn.

SKIN PROTECTION: Applicators and other handlers should wear long-sleeved shirt and long pants; gloves, and shoes plus socks. Follow manufacturer's instructions for cleaning/ maintaining personal protection equipment (PPE). If no such instructions are available, use detergent and hot water. Keep and wash PPE separately from other laundry.

EYE PROTECTION: Safety glasses with side shields should be used whenever hazardous chemicals are being handled. Goggles or full face shield should be used if there is a potential for dust generation.

OTHER PROTECTION: An eyewash station and a safety shower should be located in the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Solid
APPEARANCE:	Tan granules
ODOR:	Slight musty odor
ODOR THRESHOLD:	None established
BOILING POINT:	Not available
FREEZING/MELTING POINT:	Not applicable
DENSITY:	May range from 47 - 89 lb/ft ³
VAPOR PRESSURE (mm/Hg):	1.81 x 10 ⁻⁷ mm Hg @ 25°C (ai)
VAPOR DENSITY:	Heavier than air
PERCENT VOLATILE BY VOL:	Not applicable
SOLUBILITY IN WATER:	Not appreciably soluble in water
SOLUBILITY (Other):	The active ingredient is soluble in aromatic solvents
PARTITION COEFFICIENT (Log P_{o/w}):	> 6.0 (Bifenthrin)
pH (5% in water):	Not available
EVAPORATION RATE:	Not available

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY (Conditions to avoid): This product is stable under normal storage and use conditions.

INCOMPATIBILITY: Avoid excessive heat and flame.

HAZARDOUS DECOMPOSITION PRODUCTS: This product may emit hazardous fumes of hydrogen chloride, hydrogen fluoride, carbon oxides, and unidentified organic compounds when it is heated excessively or burned. **WEAR SELF-CONTAINED BREATHING APPARATUS** when these conditions are present.

HAZARDOUS POLYMERIZATION: This product will not polymerize.

11. TOXICOLOGICAL INFORMATION

GENERAL: The information listed below are either for this formulation (f) or for the active ingredient (ai).

INGESTION:	Oral LD ₅₀ (rat):	> 5000 mg/kg (f)
DERMAL:	Skin LD ₅₀ (rabbit):	> 5050 mg/kg (f)
INHALATION:	Inhalation LC ₅₀ (rat):	Not available at this time
IRRITATION:	Eye irritation:	Minimally irritating (f)
	Skin irritation: (rabbit)	Non irritating (f)
SENSITIZATION:	Skin sensitization: (Mouse LLNA)	Not a sensitizer (ai)

11. TOXICOLOGICAL INFORMATION, cont'd

TERATOGENICITY: In studies with animals, Bifenthrin did not cause teratogenicity (ai).

MUTAGENICITY: Tests with Bifenthrin have shown an absence of genotoxicity (ai).

CARCINOGENICITY: Bifenthrin has produced an increased incidence of urinary bladder tumors in male mice at the highest dose level tested. This response however was considered equivocal and not evidence of a clear compound related effect. EPA has classified Bifenthrin as a class C carcinogen, a possible human carcinogen (ai). Respirable crystalline silica and wood dust are listed as being carcinogenic by both IARC and NTP. These compounds are present at less than 0.01% each in the product.

REPRODUCTIVE TOXICITY: In studies with animals, Bifenthrin did not cause reproductive toxicity (ai).

TOXICOLOGICALLY SYNERGISTIC PRODUCTS: No information is available (ai).

12. ECOLOGICAL INFORMATION

GENERAL: This pesticide is highly 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, 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 washwaters. Do not apply directly adjacent to potable water supplies.

13. DISPOSAL CONSIDERATIONS

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

CONTAINER DISPOSAL: Completely empty bag into mixing 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. Contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional office for guidance.

14. TRANSPORTATION INFORMATION

GENERAL: This product is not regulated when shipped by highway, railroad or air in packages < 400 kg. When this product is shipped in bulk or is shipped by water (non-bulk or bulk), it is regulated according to the data listed below:

14. TRANSPORTATION INFORMATION, cont'd

DOT CLASS: 9
UN NUMBER: UN3077
IMDG CLASS (SEA): 9
IATA CLASS: 9
MARINE POLLUTANT: Yes (Bifenthrin = Severe marine pollutant)
PACKING GROUP: III
HAZARD LABEL(S): Environmentally Hazardous
PROPER SHIPPING NAME(S): Environmentally hazardous substances, solid, n.o.s.
(Bifenthrin 0.2%)
REPORTABLE QUANTITY: None
US SURFACE FREIGHT CLASS: Insecticides, NOI, Poison other than Poison, NMFC
Item 102120

PACKAGING

GENERAL DESCRIPTION: 25 lb and 50 lb bags

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

This product is registered under EPA/FIFRA Regulations. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

SARA TITLE III DATA:

Section 311 & 312 Hazard Categories:

Immediate Health Hazard: Yes
Delayed Health Hazard: Yes
Fire Hazard: No
Reactive Hazard: No
Sudden Pressure Release Hazard: No

Section 302 Extremely Hazardous Substances: None

Section 313 Toxic Chemicals:

Bifenthrin (CAS 82657-04-3) 0.2%

CERCLA Reportable Quantities (RQ): Not listed

STATE REGULATIONS:

CALIFORNIA (Proposition 65): This product may contain trace amounts of respirable crystalline silica, known to the State of California to cause cancer.

16. OTHER INFORMATION

MSDS STATUS:

Date This Revision: 29 April, 2011

Date Previous Revision: 18 March, 2008

Person Responsible for Preparation: Gary A. Braden

REASONS FOR REVISION: Annual Review. Container disposal in section 13 and types of containers available in section 14 were updated to reflect current knowledge.

DISCLAIMER: This information is provided for the limited guidance to the user. While AMVAC believes that the information is, as of the date hereof, reliable, it is the user's responsibility to determine the suitability of the information for the users' purposes. The user is advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional, or variable conditions or circumstances exist (like combinations with other materials), or because of applicable regulations. No express or implied warranty of merchantability or fitness for a particular purpose or otherwise is made hereunder with respect to the information or the product to which the information relates.

ABBREVIATIONS:

ai	-	active ingredient
ACGIH	-	American Conference of Governmental Industrial Hygienists
BEI	-	Biological Exposure Index
CERCLA	-	Comprehensive Environmental Response, Compensation, and Liability Act
EPA	-	Environmental Protection Agency
FIFRA	-	Federal Insecticide, Fungicide, and Rodenticide Act
IARC	-	International Agency for Research on Cancer
NTP	-	National Toxicology Program
OSHA	-	Occupational Safety and Health Agency
SARA	-	Superfund Amendments and Reauthorization Act
TSCA	-	Toxic Substances Control Act

This is the last page of this MSDS. There should be 8 pages.