AZAD 3.5
BOTANICAL INSECTICIDE

An Insecticide for Use on Vegetables, Ornamentals, Trees, Shrubs, Lawns, and Plants In and Around Commercial Nurseries, Greenhouses, Interiorscapes, and the Home

Kills/repels a variety of insect pests including whiteflies, Japanese beetles, caterpillars, aphids, gypsy moths, white grubs, chinch bugs, and diamondback moths.

ACTIVE INGREDIENT:	
Azadirachtin	3.5%
INERT INGREDIENTS	96.5%
TOTAL	100.0%

KEEP OUT OF REACH OF CHILDREN

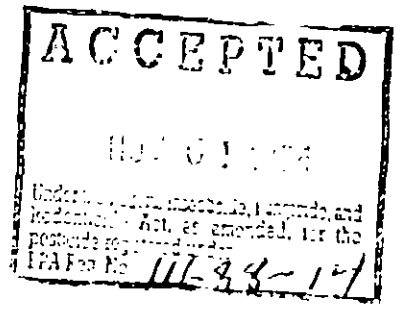
CAUTION

Manufactured By: W. R. Grace & Co.-Conn.
7379 Route 32
Columbia, MD 21044

EPA Reg. No. 11688-#124 Net Contents:_____

EPA Est. No. _____

See Back Panel for Additional Precautionary Statements



PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if swallowed. Avoid contact with skin, eyes, or clothing. Avoid contamination of feed and foodstuffs. Avoid breathing spray mist. In case of eye contact, flush eyes with plenty of water. If on skin, wash with soap and water. If irritation persists, get medical attention.

[Commercial Label Only]

Personal Protective Equipment:

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

Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinylchloride (PVC) or Viton.

Shoes plus socks.

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

User Safety Recommendations:

Users should

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing 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 product may be hazardous to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of water.

Physical and Chemical Hazards:

Flammable. Do not use or store near heat or open flame.

STORAGE AND DISPOSAL

Storage: Keep in original container. Store in a cool, dry place, away from direct sunlight, feed or foodstuffs. Keep container tightly sealed when not in use. Do not store below 50°F (10°C) or above 95°F (35°C).

[Commercial Label Only]
Disposal: Rinsewater and unused diluted pesticide may be disposed of on-site or in an approved waste disposal facility. Do not reuse empty container. Triple rinse empty containers and offer for recycling or puncture and dispose of in a sanitary landfill or by incineration, if allowed by state and local authorities. If burned, stay out of smoke.

[Home Use Label Only]
Disposal: Do not reuse empty container. Securely wrap original container in several layers of newpaper and discard in trash. Rinse thoroughly before discarding in trash.

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING

[Commercial Label Only]

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

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

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinylchloride (PVC) or Viton.
- Shoes plus socks.

General

- Botanical Insecticide Concentrate
- Broad Spectrum Insecticide
- Broad Spectrum Organic Insecticide
- Organic Insecticide
- Multi-Purpose Insecticide
- Multi-Purpose Organic Insecticide
- Kills and/or repels insects/Japanese beetles.
- Kills larval stages of insects.
- Organically kills insects.
- Organically repels Japanese beetles.
- For Indoor and Outdoor Use
- Formulated for interiorscape use.
- Not for use in food-handling areas.
- Shake well before using.
- AZAD 3.5 is most effective when applied 2-3 times in succession.
- Spraying directly onto the pest and a longer duration of leaf wetting increase effectiveness. Apply in early to mid-morning or late afternoon. This is particularly important with whitefly adults which are sedentary on the undersides of leaves at these times.
- AZAD 3.5 in diluted solution should be maintained at pH between 3-8. Use outside of this pH range may cause product degradation. Spray solutions should be used within several hours of preparation for maximum effectiveness. Do not store diluted solution for later use.

- Do not add adjuvants (spreaders, surfactants, etc.) to AZAD 3.5 as it already contains its own surfactant.

- Do not apply to wilted or otherwise stressed plants, or to newly transplanted material prior to root establishment. Do not apply to known spray-sensitive plants without testing.

- AZAD 3.5 has been found to be compatible when used in conjunction with most beneficial insects. It is recommended that a small trial be conducted to assure compatibility before using on a large scale.

NONCROP APPLICATIONS

Directions for Interiorscapes, Plants, Landscapes, Ornamentals, Trees, Lawns, and Shrubs

Commercial Use

- For use to control whiteflies, thrips, mealybugs, leafminers, loopers, caterpillars, beet armyworms, and aphids on bedding plants, potted plants, foliage plants, ornamentals, trees, and shrubs in and around greenhouses, commercial nurseries, interiorscapes, and homes.

- For use to control gypsy moths, weevils, psyllids, webworms, hornworms, spruce budworms, and pine sawflies on trees and shrubs on residential and commercial landscapes.

- AZAD 3.5 may be used on all listed fruits, vegetables, vegetable transplants, and herbs both inside and outside of the greenhouse.

- For high volume application, dilute AZAD 3.5 to a concentration of 2.9 to 5.8 ounces per 100 gallons of water (1/6 to 1/3 teaspoon of AZAD 3.5 per gallon of water). Mix thoroughly. Apply 25-40 psi with hand sprayer or 100-200 psi with power sprayer as a fine spray to both leaf surfaces to runoff. Excessive application is unnecessary and should be avoided.

- For low volume application, apply 5/8 pint of AZAD 3.5 (equivalent to 8 grams of active ingredient) per acre in sufficient water to provide adequate coverage.

- Sprays may be applied on a preventative 7-day schedule or at the first sign of insect presence. This schedule is effective under low insect pressure. Under high insect pressure, apply every 3-4 days.

- For drench application in greenhouse plantings, use 2.9 ounces per 100 gallons and apply at the rate of 1 quart of diluted solution per square foot of growing media surface. Repeat at 14-day intervals during the growing season.

Tank Mixing

AZAD 3.5 Botanical Insecticide Concentrate has been found to be compatible with most commonly used fungicides, insecticides, and fertilizers. Physical compatibility should first be checked by using the correct proportion of products in a small jar test. Growers should then test tank-mix combinations for phytotoxicity on a sample of plants prior to use. This is also recommended with combinations used before as environmental conditions can alter the interaction between compounds. *Due to the wide variation in climatic conditions, cultural practices, and other factors, the user assumes full responsibility for any crop damage or other liability resulting from the use of AZAD 3.5 Botanical Insecticide Concentrate in a tank mix combination.* Do not mix AZAD 3.5 with oxidizing agents such as bleach, or strong acids and bases as they will destabilize the product.

Home Use

- For use on bedding plants, potted and foliage plants, ornamentals, trees, shrubs, vegetable gardens, and fruit trees in and around homes to control the immature or larval forms of insect pests.

- For use on trees, lawns, and shrubs on residential landscapes to control the immature or larval stages of pests.

- For use as a repellant against ants, cockroaches, and Japanese beetles.

- Apply 5/8 to 1 1/4 pints of AZAD 3.5 per acre (or 0.22-0.42 ounces per 1000 square feet) using enough spray volume to obtain thorough coverage, usually 50-100 gallons of diluted material per acre (or 1-2 gallons per 1000 square feet). Apply with a hand sprayer as a fine spray to leaf surfaces to run-off. Be sure to coat undersides of leaves as this is where many insects hide. Excessive application is unnecessary and should be avoided. Do not apply to known sensitive plants without a prior small-scale test application.

- Known sensitive plants
  - African Violet flowers
  - Hibiscus flowers
  - Impatiens flowers

Directions for Repelling Japanese Beetles from Rose Plants

- For best results, apply to roses at the first sign of Japanese beetle emergence in early summer at the rate of 5/8 pint of AZAD 3.5 per 100 gallons of water.
- AZAD 3.5 is more effective when used as a preventative.
- Spray to run-off, making sure to completely cover all parts of the plant, including buds and flowers.
- Repeat application weekly or after rainfall.
- More frequent applications may be necessary during periods of rapid plant growth, as new growth that occurs after application is not fully protected.
- Continue applications as long as adult beetles are present.
- Do not spray water directly onto foliage or otherwise wash off the leaves after treatment. This will reduce the effectiveness of the application.
- After initial application, some beetles may be present on foliage but they will not feed on it.

Directions for Lawns and Turf

SURFACE-FEEDING INSECTS

- For use to control cutworms, armyworms, sod webworms, crickets, chinch bugs, leafhoppers, and grasshoppers.
  - Apply 5/8 to 1 1/4 pints of AZAD 3.5 per acre (or 0.22-0.42 ounces per 1000 square feet) using enough spray volume to obtain thorough coverage, usually 50-100 gallons of diluted material per acre (or 1-2 gallons per 1000 square feet).
  - Apply at first sign of pest emergence or damage. Reapply as necessary. Be sure to treat under shrubs and plants bordering house. Do not apply before it rains. Do not water turf for 2 days after application.

SUBSURFACE-FEEDING INSECTS

- For use to control white grubs (Japanese beetles, European chafers, dung beetles, green June beetles, May/June beetles, annual white grubs, grub beetle, southern masked chafers, etc.) and crane flies.

  - Apply 5/8 to 1 1/4 pints of AZAD 3.5 per acre (or 0.22-0.42 ounces per 1000 square feet) using enough spray volume to obtain thorough coverage, usually 50-100 gallons of diluted material per acre (or 1-2 gallons per 1000 square feet).

  - Application should be made soon after adults emerge in summer (1-3 weeks after first sign of adults). Turf should be mowed before application. Irrigate turf prior to application. Do not water turf within 24 hours after application. Do not mow turf within 3 days after application.

- For use to control mole crickets.

  - Apply 5/8 to 1 1/4 pints of AZAD 3.5 per acre (or 0.22-0.42 ounces per 1000 square feet) using enough spray volume to obtain thorough coverage, usually 50-100 gallons of diluted material per acre (or 1-2 gallons per 1000 square feet).

  - For best results, apply when nymphs are small, in the early spring. If necessary reapply at 1-2 week intervals.

- For use to control billbugs.

  - Apply 5/8 1 1/4 pints of AZAD 3.5 per acre (or 0.22-0.42 ounces per 1000 square feet) using enough spray volume to obtain thorough coverage, usually 50-100 gallons of diluted material per acre (or 1-2 gallons per 1000 square feet).

  - Apply in mid to late spring or at first sign of pest emergence or damage. Do not apply before it rains. Do not water turf for 2 days after appliation. Reapply as necessary. Repeat treatment in early to mid fall to control possible second generation.

DIRECTIONS FOR FOOD CROP APPLICATION

General Directions

- Do not apply this product through any type of irrigation system.
- Use care when applying near streams, ponds, lakes, or other bodies of water. AZAD 3.5 should not be applied when weather conditions favor drift or when the likelihood of runoff is high.

Specific Crop Directions

Application Rate:

Apply 1/3 to 1 1/4 pints of AZAD 3.5 per acre in sufficient water to assure adequate coverage. The low rate should be used as a preventative when pest pressure is low, or if used in conjunction with adulticide products. Otherwise, the high rate should be used.

CITRUS, POME AND STONE FRUITS	
Crops	Pests
Grapefruits	Greenhouse whiteflies
Kumquats	Sweet Potato Whiteflies
Lemons	Mealybugs
Limes	Leafminers
Oranges	Caterpillars
Apples	Aphids
Crabapples	Fruit flies
Pears	Psyllids
Quinces	Thrips
Jujubes	Fall webworms
Apricots	Weevils
Cherries	Gypsy Moths
Nectarines	Leafhoppers
Peaches	Grasshoppers
Plums	
Prunes	

CUCURBITS	
Crops	**Pests**
Balsam pears	Greenhouse whiteflies
Chinese waxgourds	Sweet potato whiteflies
Cucumbers	Budworms
Gherkins	Fall armyworms
Gourds	Melonworms
Cantaloupes	Pickleworms
Honeydew melons	Rindworms
Mangoes	Squash vine borers
Pumpkins	Leafminers
Squashes	Squash bugs
Watermelons	

BULB AND COLE VEGETABLES	
Crops	**Pests**
Broccoli	Greenhouse whiteflies
Brussels sprouts	Sweet potato whiteflies
Bok Choy	Cabbage Loopers
Cabbage	Imported Cabbage worm
Cauliflower	Diamondback moth
Chinese Spinach	Aphids
Celery	Cutworms
Collards	Thrips
Cress	Armyworms
Endive	Leafminers
Fennel	Onion maggots
Kale	Hornworms
Kohlrabi	Webworms
Lettuce	Caterpillars
Mustard greens	Weevils
Parsley	
Rhubarb	
Spinach	
Swiss Chard	
Turnip tops	
Garlic	
Leek	
Onions	
Shallots	

LEGUME AND FRUITING VEGETABLES	
Crops	Pests
Beans	Loopers
Chick peas	Colorado potato beetles
Lentils	Leafminers
Peas	Cabbage loopers
Peanuts	Caterpillars
Soybeans	Greenhouse whiteflies
Eggplants	Sweet potato whiteflies
Ground cherries	Armyworms
Peppers	Cutworms
Tomatoes	Soybean loopers
	Hornworms
	Psyllids
	Tomato fruitworms
	Weevils
	Tomato pinworms
	Pepper weevils
	Garden webworms
	Mexican bean beetles
	Bean leaf beetles

ROOT AND TUBER VEGETABLES	
Crops	**Pests**
Artichokes	Artichoke plume moths
Beets	Colorado potato beetles
Carrots	Leafhoppers
Cassava	Aster leafhoppers
Ginger	Potato flea beetle
Horseradish	Aphids
Parsnips	Greenhouse whiteflies
Potatoes	Sweet potato whiteflies
Radishes	Psyllids
Rutabaga	Cabbage Loopers
Sweet potatoes	Diamondback moths
Tumeric	Hornworms
Turnips	Webworms
Yams	Caterpillars
Yam beans	Armyworms

SMALL FRUITS AND BERRIES	
Crops	Pests
Blackberry	Gypsy moth
Blueberry	Blueberry leafroller
Boysenberry	Loopers
Cranberry	Fruit tree leafroller
Current	Grape berry moth
Dewberry	Oblique banded leafroller
Elderberry	Hornworm
Gooseberry	Armyworm
Grape	Tobacco budworm
Huckleberry	Cherry fruitworm
Loganberry	Green fruitworm
Raspberry	Grape leaffolder
Strawberry	Grapeleaf skeletonizer
Youngberry	Omnivorous leafroller
	Caterpillars
	Mites
	Thrips

HERBS AND SPICES	
Crops	**Pests**
Anise	Aphids
Balm	Spider mites
Basil	Flea beatles
Borage	Leafhoppers
Camomile	
Caraway	
Catnip	
Chives	
Celery	
Coriander	
Cumin	
Curry leaf	
Dandelion	
Dill	
Fennel	
Mint	
Marigold	
Marjoram	
Pennyroyal	
Peppermint	
Rosemary	
Rue	
Sage	
Savory	
Spearmint	
Sweet Bay	
Tarragon	
Thyme	
Wintergreen	

NUTS	
Crops	Pests
Almond	Aphids
Beach nut	Peach twig borer
Brazil nut	Fruittree leafroller
Butternut	San Jose scale
Cashew	Chestnut weevil
Chestnut	Filbert aphids
Filberts	Filbert leafroller
Hickory nuts	Filbertworm
Macadamia	Black margined aphid
Pecan	Fall webworm
Pistachio	Lesser webworm
Walnut	Hickory shuckworm
	Pecan leaf phylloxera
	Pecan nut casebearer
	Pecan spittlebug
	Pecan stem phylloxera
	Pecan weevil
	Twig girdler
	Walnut caterpillar
	Calico scale
	Codling moth
	Frosted scale
	Navel orange worm

MISCELLANEOUS	
Crops	Pests
Cotton	Greenhouse whiteflies Sweet potato whiteflies Thrips Tobacco budworms Cotton bollworms Loopers Armyworms Cotton leafperforators Leafminers Leafrollers Pink bollworms Boll weevils Leafhoppers Cutworms

WARRANTY

W. R. Grace & Co.-Conn. warrants that the material contained herein shall substantially conform to the chemical composition stated herein. The foregoing warranty is in lieu of all other warranties, expressed and implied, including the implied warranties of merchantability and fitness for a particular purpose which are expressly disclaimed. Buyer's sole remedy shall be replacement of defective material or refund of the purchase price. In no event shall Grace be liable for any injury, loss, or damage, direct, indirect, incidental, or consequential arising out of the use of this material.