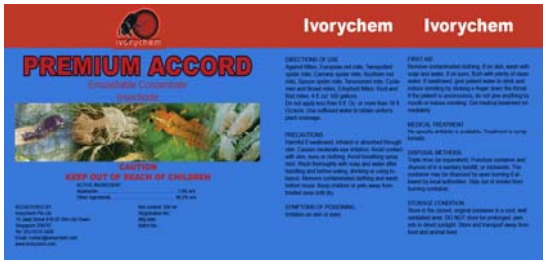
READ THE ENTIRE LABEL BEFORE USING THIS PRODUCT.

USE ONLY IN ACCORDANCE WITH INSTRUCTIONS.

KEEP OUT OF REACH OF CHILDREN

PREMIUM ACCORD 1.8 EC



INGREDIENTS

Abamectin .....1.8% w/v
Other ingredients ……..98.2% w/v

The active ingredient in PREMIUM ACCORD is Abamectin.

Trade names for products containing Abamectin include Affirm, Agri-Mek, Avermectin, Avid, MK 936, Vertimec, and Zephyr.

What is Abamectin and how does it work?
Abamectin is a mixture of avermectins containing about 80% avermectin B1a and 20% avermectin B1b. These two components, B1a and B1b, have very similar biological and toxicological properties. The avermectins are insecticidal/miticidal compounds derived from the soil bacterium Streptomyces avermitilis. Abamectin is a natural fermentation product of this bacterium. It acts as an insecticide by affecting the nervous system of and paralyzing insects. Abamectin is used to control insect and mite pests of citrus, pear, and nut tree crops, and it is used by homeowners for control of fire ants.

Avermectin is used to control insect and mite pests of ornamental plants in greenhouses, such as spider mites and leafminers (PREMIUM ACCORD miticide). It is formulated into an enclosed capsule system for tree injections for control of mites and leafminers of ornamental trees, including the birch leafminer. It is a very common veterinarian medicine for treatment of internal and external parasites and mites of pets and livestock, including scabies. It is formulated into several commercial baits for control of cockroaches (ACCORD BAIT cockroach bait) and ants, including an effective formulation for the control of carpenter ants (ACCORD GRANULAR ant bait). Avermectin is widely prescribed by medical practitioners world-wide to treat parasitic infestations in humans.

Key Benefits of PREMIUM ACCORD 1.8 EC:

1. Immediate knock down effect.
2. Offers effective residual control

PRECAUTIONS

Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash before reuse. Keep children or pets away from treated area until dry.

SYMPTOMS OF POISONING

Irritation on skin or eyes.

MEDICAL TREATMENT

No specific antidote is available. Treatment is symptomatic.

FIRST AID

If on skin, remove contaminated clothes. Rinse and then rinse skin immediately with plenty of water and soap for 15-20 minutes. Call a poison control centre or doctor for treatment advice.
If inhaled, move person for fresh air. If person is not breathing, call for an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control centre or doctor for further treatment advice.
If in eyes, first hold eye open and rinse with plenty of water for 15-20 minutes (remove contact lenses if easily possible). Call poison control center or doctor for treatment advice.
If ingested, call a poison control centre 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 poison control center or doctor. Do not give anything to an unconscious person.

DIRECTIONS OF USE

Pests	Fl.oz / 100	Comments

	gal	
Mites, European red mite, Twospotted spider mite, Carmine spider mite, Southern red mite, Spruce spider mite, Tarsonemid mite: Cyclamen Broad mites Erlophyld Mites: Rust Bud mites	4	For tarsonemid mites, repeat applications to newly developing tissue may be necessary to maintain control.
Litiomyza Leafminers	8	Repeat at 7-day intervas or as necessary to maintain control.
Boxwood Leafminer	8	For control of mining larvae, make the application when adults are beginning to lay eggs in the new foliage.
Aphids Thrips Whiteflies	8	For suppression of pest populations, young immatures must be contacted by the spray.

Do not apply less than 8 fl. Oz. or more than 16 fl. Oz/acre. Use sufficient water to obtain uniform plant coverage.

DISPOSAL METHODS

Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

STORAGE CONDITION

Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Store in a locked room or place away from children, animals, flood, feedstuffs, seed and fertilizers. Triple or preferably pressure rinse containers before disposal. Add rinsing to spray tank.

For More Details including effects on environment email contact@ivorychem.com with Subject “PREMIUM ACCORD DETAILS”.

More Details:

TOXICOLOGICAL EFFECTS

- Acute toxicity: Abamectin is highly toxic to insects and may be highly toxic to mammals as well [141]. Emulsifiable concentrate formulations may cause slight to moderate eye irritation and mild skin irritation [8]. Symptoms of poisoning observed in laboratory animals include pupil dilation, vomiting, convulsions and/or tremors, and coma [141,142]. Abamectin acts on insects by interfering with the nervous system. At very high doses, it can affect mammals, causing symptoms of nervous system depression such as incoordination, tremors, lethargy, excitation, and pupil dilation. Very high doses have caused death from respiratory failure [143]. Abamectin is not readily absorbed through skin. Tests with monkeys show that less than 1% of dermally applied abamectin was absorbed into the bloodstream through the skin [141]. Abamectin does not cause allergic skin reactions [142]. The oral LD50 for abamectin in rats is 10 mg/kg, and in mice ranges from 14 mg/kg to greater than 80 mg/kg [141,142]. The oral LD50 for the product Avid EC in rats is 650 mg/kg [8]. The dermal LD50 for technical abamectin in rats and rabbits is greater than 330 mg/kg [144].
- Chronic toxicity: In a 1-year study with dogs given oral doses of abamectin, dogs at the 0.5 and 1 mg/kg/day doses exhibited pupil dilation, weight loss, lethargy, tremors, and recumbency [141]. Similar results were seen in a 2-year study with rats fed 0.75, 1.5, or 2 mg/kg/day. Rats at all the dosage levels exhibited body weight gains significantly higher than the controls. A few individuals in the high dose group exhibited tremors [141]. When mice were fed 8 mg/kg/day for 94 weeks, the males developed dermatitis and changes in blood formation in the spleen, while females exhibited tremors and weight loss [142].
- Reproductive effects: Rats given 0.40 mg/kg/day of abamectin had increased

stillbirths, decreased pup viability, decreased lactation, and decreased pup weights [142]. These data suggest that abamectin may have the protential to cause reproductive effects at high enough doses.

- Teratogenic effects: Abamectin produced cleft palate in the offspring of treated mice and rabbits, but only at doses that were also toxic to the mothers [141]. There were no birth defects in the offspring of rats given up to 1 mg/kg/day [142]. Abamectin is unlikely to cause teratogenic effects except at doses toxic to the mother.
- Mutagenic effects: Abamectin does not appear to be mutagenic. Mutagenicity tests in live rats and mice were negative. Abamectin was shown to be nonmutagenic in the Ames test [1].
- Carcinogenic effects: Abamectin is not carcinogenic in rats or mice. The rats were fed dietary doses of up to 2 mg/kg/day for 24 months, and the mice were up to 8 mg/kg/day for 22 months [141]. These represent the maximum tolerated doses.
- Organ toxicity: Animal studies indicate that abamectin may affect the nervous system.
- Fate in humans and animals: Tests with laboratory animals show that ingested avermectin B1a is not readily absorbed into the bloodstream by mammals and that it is rapidly eliminated from the body within 2 days via the feces [142]. Rats given single oral doses of avermectin B1a excreted 69 to 82% of the dose unchanged in the feces. The average half-life of avermectin B1a in rat tissue is 1.2 days [144]. Lactating goats given daily oral doses for 10 days excreted 89% of the administered avermectin, mainly in the feces. Less than 1% was recovered in the urine [144].

ECOLOGICAL EFFECTS

- Effects on birds: Abamectin is practically nontoxic to birds [142]. The LD50 for abamectin in bobwhite quail is >2000 mg/kg. The dietary LC50 is 3102 ppm in bobwhite quail [145]. There were no adverse effects on reproduction when mallard ducks were fed dietary doses of 3, 6, or 12 ppm for 18 weeks [145].
- Effects on aquatic organisms: Abamectin is highly toxic to fish and extremely toxic to aquatic invertebrates [142]. Its LC50 (96-hour) is 0.003 mg/L in rainbow trout, 0.0096 mg/L in bluegill sunfish, 0.015 mg/L in sheepshead minnows, 0.024 mg/L in channel catfish, and 0.042 mg/L in carp. Its 48-hour LC50 in Daphnia magna, a small freshwater crustacean, is 0.003 mg/L. The 96-hour LC50 for abamectin is 0.0016 mg/L in pink shrimp, 430 mg/L in eastern oysters, and 153 mg/L in blue crab [145]. While highly toxic to aquatic organisms, actual concentrations of abamectin in surface waters adjacent to treated areas are expected to be low. Abamectin did not bioaccumulate in bluegill sunfish exposed to 0.099 ug/L for 28 days in a flow-through tank. The levels in fish were from 52 to 69 times the ambient water concentration, indicating that abamectin does not accumulate or persist in fish [145].
- Effects on other organisms: Abamectin is highly toxic to bees, with a 24-hour contact LC50 of 0.002 ug/bee and an oral LD50 of 0.009 ug/bee [145].

ENVIRONMENTAL FATE

- Breakdown in soil and groundwater: Abamectin is rapidly degraded in soil. At the soil surface, it is subject to rapid photodegradation, with half-lives of 8 hours to 1 day reported [142,145]. When applied to the soil surface and not shaded, its soil half-life is about 1 week. Under dark, aerobic conditions, the soil half-life was 2 weeks to 2 months [142]. Loss of abamectin from soils is thought to be due to microbial degradation. The rate of degradation was significantly decreased under anaerobic conditions [145]. Because abamectin is nearly insoluble in water and has a strong tendency to bind to soil particles, it is immobile in soil and unlikely to leach or contaminate groundwater [145]. Compounds produced by the degradation of abamectin are also immobile and unlikely to contaminate groundwater [145].
- Breakdown in water: Abamectin is rapidly degraded in water. After initial distribution, its half-life in artificial pond water was 4 days. Its half-life in pond sediment was 2 to 4 weeks [145]. It undergoes rapid photodegradation, with a half-life of 12 hours in water [142]. When tested at pH levels common to surface and groundwater (pH 5, 7, and 9), abamectin did not hydrolyze [145].
- Breakdown in vegetation: Plants do not absorb abamectin from the soil [145]. Abamectin is subject to rapid degradation when present as a thin film, as on treated leaf surfaces. Under laboratory conditions and in the

presence of light, its half-life as a thin film was 4 to 6 hours [145].

PHYSICAL PROPERTIES AND GUIDELINES

PHYSICAL PROPERTIES:

- Appearance: Abamectin is a colorless to yellowish crystalline powder [1].
- Chemical Name: avermectin B1
- CAS Number: 71751-41-2 (avermectin B1a and avermectin B1b) [1]
- Molecular Weight: 873.11
- Water Solubility: Insoluble [1]
- Solubility in Other Solvents: v.s. in acetone, methanol, toluene, chloroform, and ethanol [1]
- Melting Point: 150-155 C [1]
- Vapor Pressure: Negligible [1]
- Partition Coefficient: Not Available
- Adsorption Coefficient: 5000 (estimated) [53]

EXPOSURE GUIDELINES:

- ADI: 0.0001 mg/kg/day [12]
- MCL: Not Available
- RfD: 0.0004 mg/kg/day [13]
- PEL: Not Available
- HA: Not Available
- TLV: Not Available

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