

FMC

# Onyx™

## INSECTICIDE

For use only by pest control operators or commercial applicators to control pests on lawns and ornamental plants.

Active Ingredient:	By Wt.
Bifenthrin*	23.4%
Other Ingredients**	76.6%
100.0%	

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

\*\*Contains petroleum distillates.

Onyx™ Insecticide contains 2 pounds active ingredient per gallon.

U.S. Patent No. 4,238,505

EPA Reg. No. 279-3177

EPA Est. 279-

FMC Corporation

Agricultural Products Group

Philadelphia PA 19103

3/04-C

6206

### KEEP OUT OF REACH OF CHILDREN

### WARNING

See other panels for additional precautionary information.

#### FIRST AID

<b>If swallowed</b>	<ul style="list-style-type: none"> <li>Immediately call a poison control center or doctor.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give any liquid to the person.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>

#### HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-(800)-331-3148 for Emergency Assistance.

#### NOTE TO PHYSICIAN

Pesticide Hotline (800) 858-7378. This product is a pyrethroid. This product also contains aromatic hydrocarbons. Because of the risk of hydrocarbon pneumonitis if even tiny amounts are aspirated into the lung during emesis, consideration should be given to gastric lavage with endotracheal tube in place. Treatment is symptomatic and supportive. Animal and vegetable fats, milk, cream and alcohol may increase absorption and should not be administered.

For Information Regarding the Use of this Product Call 1-800-321-1FMC (1362).

### PRECAUTIONARY STATEMENTS

#### Hazards to Humans (and Domestic Animals)

##### Warning

May be fatal if swallowed. Causes skin irritation and moderate eye irritation. Do not get on skin or on clothing. Avoid breathing vapors or spray mist, and contact with eyes. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash contaminated clothing before reuse.

All pesticide handlers (mixers, loaders and applicators) must wear long-sleeved coveralls worn over a minimum of short-sleeved shirt and short pants, socks, chemical-resistant footwear, chemical-resistant gloves and protective eyewear. After the product is diluted in accordance with label directions for use, shirts, pants, socks, shoes and waterproof gloves are sufficient.

##### Environmental Hazards

This pesticide is extremely toxic 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 equipment washwaters. Do not apply when weather

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conditions favor drift from treated areas. Care should be used when spraying to avoid fish and reptile pets in/around ornamental ponds.

Do not apply this product or allow it to drift to crops or weeds on which Bees are actively foraging. Additional information may be obtained from your Cooperative Extension Service.

#### Physical/Chemical Hazards

Do not use or store near heat or open flame.

Do not apply this product in or on electrical equipment due to the possibility of shock hazard.

#### DIRECTIONS FOR USE

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

Do not apply by air.

Do not use in greenhouses, nurseries.

#### STORAGE AND DISPOSAL

##### Pesticide Storage

If crystals are observed, warm material to above 60°F by placing container in warm location. Shake or roll container periodically to redissolve solids. Do not use external source of heat for warming container.

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, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call FMC: (800) 331-3148.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter, commercial clay or gel absorbent. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

##### 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

Metal or Plastic Container: Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Do not cut or weld metal containers.

Returnable/Refillable Containers: Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

#### General Information on the Use of this Product

Not for use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climatic modifications and being grown in interior plantscapes, ornamental gardens or parks, or lawns and grounds.

#### General Applications Instructions

Onyx™ Insecticide formulation mixes readily with water and other aqueous carriers, and controls a wide spectrum of insects and mites on trees, shrubs, foliage plants, non-bearing fruit and nut trees, and flowers in outdoor plantscapes, such as around residential dwellings, parks, institutional buildings, recreational areas, athletic fields and home lawns. Non-bearing crops are perennial crops that will not produce a harvestable raw agricultural commodity during the season of application.

Onyx™ may be tank-mixed with other products, including insect growth regulators. When tank mixing Onyx™ with other products, observe all precautions and limitations on each separate product label. The addition of spreader stickers is not necessary. The physical compatibility of Onyx™ may vary with different sources of pesticide products, and local cultural practices. Any tank mixture which has not been previously tested should be prepared on a small scale (pint or quart jar), using the proper proportions of chemicals and water to ensure the physical compatibility of the mixture.

The following procedure is recommended for preparation of a new tank mix, unless specified otherwise in label directions: (1) Add wettable powders to tank water, (2) Agitate, (3) Add liquids and flowables, (4) Agitate, (5) Add emulsifiable concentrates, and (6) Agitate. If a mixture is found to be incompatible following this order of addition, try reversing the order of addition, or increase the volume of water. **Note:** If the tank-mixture is found to be compatible after increasing the amount of water, then the sprayer will need to be recalibrated for a higher volume application. Do not allow tank mix to stand overnight.

When using tank mixes, observe all restrictions and precautions which appear on the labels of these products. Provide constant agitation to keep the mixture in solution.

#### APPLICATION RECOMMENDATIONS

**Lawn:** Apply Onyx™ as a broadcast treatment. Use higher volumes up to 10 gallons of carrier per 1000 square feet to get uniform coverage when treating dense grass foliage.

For low water volume usage, less than 2 gallons/1000 square feet, addition of a non-ionic or silicone based surfactant (0.25% v/v) is recommended, as is immediate

irrigation of treated area with at least 0.25 inches of water following application to ensure efficacy of sub-surface pests such as, but not limited to, Mole Crickets.

**LAWN APPLICATION RATES**

Pest	Onyx™		Comments
	lb ai/10 Gallons	fl.oz./10 Gallons	
Ants Armyworms Billbugs Chinch Bugs  Crickets Cutworms Earwigs Fall Webworms Fleas (adults, larvae) Grasshoppers Mites Mole Crickets* Sod Webworms Spittlebugs	0.07-0.15 fl.ozs. per 1000 square feet		*For control of overwintered Mole Crickets apply the lower rate in early Spring. For the control of adult Mole Crickets in late-Summer or early Fall, apply the higher rate.  To enhance control a non-ionic surfactant or a silicone based surfactant (0.25% v/v) may be applied as a tank-mix for the control of late Summer or Fall Adult Mole Crickets. To maximize efficacy against sub-surface pests, Onyx™ Insecticide should be applied with a non-ionic or silicone based surfactant (0.25% v/v) in sufficient water to ensure good penetration of spray to soil-thatch matrix. Treated areas should then be irrigated with 0.25 to 0.5 inches of water immediately afterwards paying special attention so that run-off or puddling does not occur.  Delay watering or mowing for 24 hours after application to ensure optimum control of Armyworms, Cutworms and Sod Webworms.
Japanese Beetles (adult)	0.07-0.30 fl.ozs. per 1000 square feet		

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 make a single repeat application of this product if there are signs of renewed insect activity, but not sooner than two weeks after the first application.

Do not apply when wind conditions favor downwind drift to nearby water bodies.

Do not apply when wind velocity exceeds 10 miles per hour.

Avoid application when wind gusts approach 10 mph.

Apply using nozzles that provide the largest droplet size compatible with adequate coverage.

**Ornamentals and Trees (Foliar applications):** For ornamental applications, dilute 0.26 to 1.28 fluid ounces of Onyx™ Insecticide per 10 gallons of water and apply at the rate of 10 gallons per 4,356 square feet. One gallon of finish spray will treat 435 square feet. If a higher volume application is required for adequate coverage of the plant canopy, Onyx™ may be diluted in large volumes of water as long as the maximum label rate (1.28 fluid ounces per 4,356 square feet) is not exceeded. Onyx™ may be applied through low volume equipment by dilution with water and providing the maximum label rate (1.28 fluid ounces per 4,356 square feet) is not exceeded.

**ORNAMENTAL APPLICATION RATES**

Pest	Rate		Comment
	lb ai/10 Gallons	fl.oz./10 Gallons	
Ants Aphids Bagworms Black Vine Weevil (adults) Brown Soft Scales Broad Mites Budworms California Red Scale (crawlers) Centipedes Clover Mites Crickets Cutworms Earwigs Elm Leaf Beetles Fall Webworms Flea Beetles	0.004 to 0.02	0.26 to 1.28	Apply the specified rate as a full coverage foliar spray. Repeat as necessary to achieve control using higher rates as pest pressure and foliage area increases. Repeat application should be limited to no more than once per seven days.  To control Bagworm: Apply when larvae begin to hatch. Spray larvae directly. Applications made when larvae are young will be most effective.

Pest	Rate		Comment
	lb ai/10 Gallons	fl.oz./10 Gallons	
Fungus Gnats (adults) Grasshoppers Lace Bugs Leafhoppers Leaf feeding Caterpillars Mealybugs Millipedes Mole Crickets* Orchid Weevil Pillbugs Pine Needle Scales (crawlers) Plant Bugs (incl. Lygus spp) San Jose Scales (crawlers) Sowbugs Spiders Spittlebugs Tent Caterpillars Tip Moths Weevils Whiteflies			To control scale crawlers and twig borers: Treat trunks, stems, and twigs in addition to plant foliage.  Certain cultivars may be sensitive to the final spray solution. A small number of plants should be treated and observed for one week prior to application to the entire planting.  Use of an alternate class of chemistry in a treatment program is recommended to prevent or delay pest resistance.  Use sufficient water to obtain uniform coverage. Typical use rates are 10 gallons of spray per 4,356 square feet.
Citrus Thrips Beet Armyworm Diaprepes (larvae, adult) European Red Mite Leafrollers Spider Mites Thrips Twig Borers	0.006 to 0.02	0.38 to 1.28	*For control of overwintered Mole Crickets apply the lower rate in early Spring. For the control of adult Mole Crickets in late-Summer or early Fall, apply the higher rate.
Japanese Beetles (adult) Leafminers Pecan Leaf Scorch Mite	0.01 to 0.02	0.64 to 1.28	

**TRUNK SPRAYS TO ORNAMENTAL TREES**

Control of *Dendroctonus* bark beetles such as mountain pine beetle, southern pine beetle, western pine beetle, Black turpentine beetle, and engraver beetles (*Ips* spp.)

**Preventative control:** Make applications of a spray mixture containing 1.0 to 2.0 pints of Onyx™ Insecticide per 100 gallons (0.25 to 0.5 lbs. ai/100 gallons) of water to the trunk of the tree with a hydraulic sprayer in the spring of the year or when a threat of infestation is evident from nearby infested trees. Apply spray directly to the main trunk from the base of the tree to at least half way into the live crown. Spray until the bark is thoroughly wetted by the spray (usually 1 to 4 gallons of spray per tree). Do not apply more than 0.2 lbs. ai (12.8 fl. oz.) of this product to trees per acre. Repeat application may be necessary if reinfestation is likely. Application rates and application timing differ according to the target pest and other factors peculiar to each local situation. Consult your local State Extension specialist or other qualified expert for specific recommendations.

**Other bark beetles such as Elm bark beetles and Emerald Ash borer**

**Preventative control:** Make applications of a spray mixture containing 1.0 to 2.0 pints of this product per 100 gallons (0.25 to 0.5 lbs. ai/100 gallons) of water to the trunk, scaffolding and limbs of the tree with a hydraulic sprayer in the early spring or prior to adult beetle flight and tree infestation. Spray until the bark is thoroughly wetted by the spray (usually 6 to 12 gallons of spray per tree). Do not apply more than 0.2 lbs. ai of this product to trees per acre. Repeat application may be necessary if reinfestation is likely or for extended adult emergence and flight. Application rates and application timing differ according to the target pest and other factors peculiar to each local situation. Consult your local State Extension specialist or other qualified expert for specific recommendations.

**OTHER BORERS ON ORNAMENTAL TREES**

For other boring insects consult the table below. Application rate and timing will vary according to geographic location and environmental conditions. Spray until the bark is thoroughly wetted by the spray (usually 1 to 4 gallons of spray per tree). Do not apply more than 100 gallons of diluted spray mixture to trees on a treated acre. Consult your local County or State Extension specialist or other qualified authority for specific recommendations.

Pest	Recommended Rate	Specific Instructions
Clearwing Moth borers Ash borer, banded ash clearwing, Dogwood borer, Lesser peachtree borer, Lilac borer, Oak borer	6.4 to 12.8 fl. oz. per 100 gallons	Apply to the lower branches and trunks prior to adult emergence.

Pest	Recommended Rate	Specific Instructions
Coleopteran borers Bronze birch borer, Flatheaded apple tree borer	6.4 to 12.8 fl. oz. per 100 gallons	
For maximum residual control of the above listed pests.	12.8 fl. oz. per 100 gallons	

**Attention**

Do not apply to pets, crops, or sources of electricity.

Firewood is not to be treated.

Use only in well ventilated areas.

Do not allow spray to contact food, foodstuffs, food contacting surfaces, food utensils or water supplies.

Thoroughly wash dishes and food handling utensils with soap and water if they become contaminated by application of this product.

Do not treat areas where food is exposed.

Do not apply this pesticide in livestock buildings (barns).

Do not apply a broadcast application to interior surfaces of homes. Keep children and pets off treated areas following application until the spray has dried.

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of FMC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

**Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) seller or FMC, and buyer assumes the risk of any such use.**

To the extent permitted by law, FMC or seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF FMC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

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ONYX and FMS—Trademarks of FMC Corporation (03/01/04)

U.S. Patent No. 6,251,415 (SFR chemical technology).

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