

FUMAZONE* 70E

EMULSIFIABLE NEMATOCIDAL CONCENTRATE Soil Fumigant for Controlling Soil-Borne Plant Parasitic Nematodes

**SPECIMEN LABEL
(BACK)**

DOSAGE AND USE RECOMMENDATIONS

Crops	Application		Dosage (a)		
	Time	Type	Gallons Per Acre	Fl Oz 1000 ft Row Per Chisel	
Vegetables: Broccoli, Brussels sprouts, cabbage, cauliflower, carrots, celery, egg plant, endive, fescarole, lettuce, okra, parsnips, radishes, snapbeans (c)	Preplant	Overall (b)	2.1 to 2.8	6.2 to 8.2	
	Preplant	Row (d)			
	At Planting	Row (d)			
Cucurbits: Melons, cucumbers, and summer squash	Preplant	Overall (b)	2.1 to 2.8	6.2 to 8.2	
	At Planting	Row (d)			
Lima beans (p)	Preplant	Overall (b)	1.4 to 2.4	4.1 to 7.0	
Tomatoes	Direct Seeded	Preplant	Overall (b)	1.4 to 2.1	4.1 to 6.2
		At Planting	Row (d)		
		Postplant (e)	Row (d)		
	Transplants	Preplant	Overall (b)	1.4	4.1
		At Planting	Row (d)		
		Postplant	Row (d)		
Soybeans (p) Southeastern States Only (r)	Preplant	Row (q)	7 to 14 (42" row)	7.2 to 14.4	
Cotton	Preplant	Row (d)	1.4 to 2.8	4.1 to 8.2	
	At Planting	Row (d)			
Bananas	Preplant	Overall (b)	2.1 to 10.0	6.2 to 29.4	
	At Planting (t)	Row (d)			
	Postplant (f)	Row (d)			
Pineapple	Preplant	Row (d)	4.2 to 15.5	12.3 to 45.5	
	Postplant (g)	Irrigation (h)			
Berries: Blackberries, huckleberries, dewberries, loganberries, raspberries and strawberries (j)	Preplant	Overall (b)	2.8	8.2	
	At Planting	Row (d)			
	Postplant (i)	Irrigation			
Citrus Fruit (k): Grapefruit, lemons, limes, oranges, tangerines	Preplant	Overall (b)	4.2 to 10.0	12.3 to 29.4	
	At Planting	Row (d)			
	Postplant	Row (d)			
Deciduous Fruit and Nuts: Apples, cherries (l, k), figs (l), grapes, peaches, plums, prunes (l, k), almonds (m), English walnuts (m)	Preplant	Overall (b)	4.2 to 10.0	12.3 to 29.4	
	At Planting	Row (d)			
	Postplant	Irrigation			
Ornamentals: Flowers, shrubs, trees, etc. To plant species (n)	Preplant	Overall (b)	4.2	12.3	
	At Planting	Row (d)			
	Postplant	Row (d)			
Mint, spearmint, basil, etc. (o)	Preplant	Overall (b)	2.1	6.2	
	At Planting	Row (d)			
	Postplant	Irrigation			
Turf	Preplant	Overall (b)	4.2	12.3	
	Postplant	Drench (a)			
Peanuts (s)	Preplant	Overall (b)	2.0 to 3.0	5.9 to 8.8	
	At Planting	Row (d)			

- (a) Use dosage in the low range for light sand, soil and bases in the higher range on heavier soils or where deeper penetration is desired. Do not exceed maximum dosage per acre in a single year.
- (b) Overall application may be made by injection, spray incorporation or irrigation methods. Consult label under Overall Application for detailed directions.
- (c) Do not feed food plant remains to dairy cattle or animals being finished for slaughter.
- (d) For row application, where 2 or more chisels are used per row, apply at the same rate per chisel as for overall. As the distance between rows is increased, the amount of fumigant applied per acre will decrease and vice versa. For crop planting, see label directions under Planting Instructions with Row Applications.
- (e) Make the postplant application as soon as the plants become firmly established.
- (f) Do not apply more than once in each 9 to 12 month period following initial application.
- (g) Do not apply within 9 months of harvest.
- (h) Apply in areas where irrigation water is used.
- (i) Two postplant applications are recommended: the first is soon as the plants become established, the second 4 to 7 weeks later. Note: Do not treat any of the treated fruits within 46 days of harvest.
- (j) Do not apply within 55 days of harvest.
- (k) Apply no more often than once every 2 years.
- (l) Do not apply within 30 days of harvest. Do not use more than 7 gallons per acre (20.6 fl oz per 1000 feet row per set).
- (m) Do not apply within 30 days of harvest.
- (n) Before application, determine tolerance and moderately tolerant species, consult manufacturer's literature. FUMAZONE NEMATOCIDE: A Check List for Use on Ornamental Plants.
- (o) Do not use more than 8.1 gallons per acre on bent grasses.
- (p) Systems that use plant remains from lima beans, etc., which are dried, may contain bromide residues greater than those resulting from natural sources. All cuttings do not graze treated areas. Do not use lima bean or lima bean plant remains to feed dairy animals. Do not sell such plant parts to another party or allow such material to be sold.
- (q) Use 1000 feet row per row and apply at the low rate per 1000 feet row per row as specified, regardless of row spacing. Row spacing will vary with soil conditions and irrigation methods.
- (r) Ala, Ark, Del, Fla, Ga, Ky, La, Md, Miss, N.C., S.C., Tenn, Va, and the Southern part of Pa. and Mo.
- (s) Do not feed soil or residue into manure or compost taken from treated soil.
- (t) Apply 4 cc under the seed piece.

of water. Use the irrigation treatment every two years after planting. Application by both methods should be made after harvest and before leaf fall.

USE PRECAUTIONS

Important - Note Carefully Fumigation may temporarily raise the level of ammonia, nitrogen and of soluble salts in the soil. This is most likely to occur when heavy rates of fertilizer and fumigant are applied to soils that are cold, wet, acid or high in organic matter. To avoid injury to roots of ammonia sensitive plants, fertilize as indicated by soil tests made after fumigation. To avoid ammonia injury or nitrate starvation or both, avoid using fertilizers containing ammonium salts, and use only fertilizers containing nitrates until after the crop is well established and the soil temperature is above 65 F. Certain crops including cotton and pineapple are tolerant to ammonia, the above rule does not apply to them. Liming highly acid soils before fumigation stimulates nitrification and may reduce the possibility of ammonia toxicity.

To avoid reinfestation of treated soil, do not use transplants, tools or top residues that may be contaminated with soil-borne nests.

If foliage of plants is contacted by the fumigant, wash off immediately with water. FUMAZONE 70E is not recommended for use on extremely heavy mineral or muck soils.

Do not use containers, pumps or other transfer or application equipment made of aluminum, magnesium or their alloys, as under certain conditions FUMAZONE 70E may be severely corrosive to such metals.

Store in tightly closed containers in a cool place away from dwellings and out of reach of children. Not for use or storage in or around the home.

This product is toxic to wildlife. Keep out of lakes, streams, or ponds. Birds and other wildlife in treated areas may be killed. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated.

Rinse equipment and containers and dispose of wastes by burying in non-crop lands, away from water supplies. Containers should be disposed of by punching holes in them and burying with wastes.

Apply this product only as specified on this label.

WARNING

KEEP OUT OF REACH OF CHILDREN

HARMFUL LIQUID AND VAPOR • MAY BE HARMFUL OR FATAL IF SWALLOWED • ABSORBED THROUGH SKIN • LIQUID MAY CAUSE SKIN IRRITATION AND BLISTERS • VAPOR CAUSES IRRITATION OF EYES, NOSE, AND THROAT

Do not take internally • Do not get in eyes, on skin, or on clothing • Do not breathe vapor • Keep container closed • Use only in a well-ventilated area • Do not contaminate food and feedstuff • Keep children and pets off treated areas until this material has been washed into soil • Wash thoroughly with soap and water after handling and before eating and smoking

COMBUSTIBLE. DO NOT USE, POUR, SPILL, OR STORE NEAR HEAT OR OPEN FLAME

In case of contact, immediately remove contaminated shoes and clothing and wash skin with soap and water. Flush eyes with plenty of water for at least 15 minutes and get medical attention. Do not wear shoes or clothing until ABSOLUTELY free of all chemical odor. If illness results from inhalation, remove to fresh air and call a doctor. If swallowed, call a doctor. Induce vomiting by giving an emetic. Such as 1-2 tablespoons of table salt in a glass of warm water.

In case of spills or use in a confined area, have available an approved full face mask equipped with a fresh back canister meeting specifications of the U.S. Bureau of Mines for organic vapors, a full face self-contained breathing apparatus, or full face air-supplied respirator.

NOTICE Seller warrants that the product conforms to its label and does not contain any hazardous materials. Buyer warrants that the product is used in accordance with the label and that the product is not used in any manner that is not intended by the manufacturer. FUMAZONE 70E is a FUMIGANT. FUMAZONE 70E is not intended for use in any manner contrary to label instructions. Seller assumes no liability for any damage or injury resulting from the use of this product, except to the extent that such damage or injury is caused by the negligence of the seller or its agents.

Patented in U.S., No. 3,044,417. This product is used for use according to methods of Patent 2,947,436 and 3,149,472.

THE DOW CHEMICAL COMPANY

AND SUBSIDIARIES

MIDLAND, MICHIGAN 48660 USA ZURICH, SWITZERLAND HONG KONG, CHINA
CORAL GABLES, FLORIDA 33134 USA SARNIA, ONTARIO, CANADA



FUMAZONE* 70E

SPECIMEN LABEL

ACTIVE INGREDIENTS
1,2-dibromo-3-chloropropane and related halogenated C₃ aliphatics 70.6%
INERT INGREDIENTS 29.4%
Contains 8.6 Pounds of Active Ingredients Per Gallon.
E.P.A. Registration No. 464 445 ZA

FUMAZONE 70E nematicide is intended for application to mineral soil to control plant parasitic nematodes such as awl, burrowing citrus cyst, dagger, lance lesion or meadow pinning, root-knot, spiral stinging and stubby root, also symphyllans injurious to crops listed in the accompanying Dosage and Use Recommendations table. FUMAZONE 70E is an emulsifiable formulation suitable for use as is or diluted with water. For best results provide continuous mechanical agitation of nematicide-water mixtures during both mixing and application.

Before Using This Product, Read All Use Precautions and Statements of Hazard Given on Label.

GENERAL INFORMATION

Apply FUMAZONE 70E when soil temperature at a depth of not less than 5 inches is between 40° and 80°F. Soil should be in seedbed conditions with adequate moisture for good seed germination. Work plant remains into the soil and allow time to decompose before treating. Do not treat extremely wet or dry soils by injection-type application. **Read the entire label before making application.**

OVERALL (Broadcast) APPLICATION

Method: Overall applications may be made using any of several procedures, all of which place the fumigant within the soil zone of nematode infestation. Preferably use chisel equipment, with the chisels spaced 12 inches apart. Plowsole equipment may also be used. With both types of applicator, release the fumigant at a depth of 5 to 8 inches below the normal soil surface. For treatment of shallow-rooted crops such as peanuts and vegetable crops listed in the table, the fumigant may be applied as a coarse spray to the soil surface followed by immediate incorporation to a depth of 2 to 4 inches and sealing. Double-discing or equivalent is recommended for soil incorporation. To ensure satisfactory results the spray, soil-incorporation and sealing equipment should be placed in-line so as to make the treatment in one operation. Overall treatment may also be accomplished by irrigation or drench application according to directions provided elsewhere on this label.

Soil Sealing: Immediately after application seal the soil by compacting the surface with a roller, cultipacker or similar device or by sprinkling lightly with water. After plowsole application disc the land, then compact by rolling.

Exposure Period: After overall preplant application, leave soil undisturbed for 7 to 14 days.

Aeration and Preparation of Soil Before Planting: After overall preplant application the soil should be aerated by deep cultivation at the end of the exposure period. If heavy rains occur, accompanied by low temperatures during the exposure period additional aeration is required. Working the soil several times before planting will aid in aeration which is usually adequate when the fumigant odor is gone. Shallow-rooted crops can usually be planted about one week after the end of the exposure period. For deep rooted trees and shrubs, the aeration period after preplant treatments should be 4 to 6 weeks.

ROW APPLICATION

For Use as Preplant and at Planting Time: Use two or more chisels per row depending upon the width of the area to be treated. Set chisels 12 inches apart and inject the fumigant 5 to 8 inches below the final soil surface planting level. For preplant applications the treated rows may be marked by bedding or listing and by tractor or press wheels.

For Use as Postplant Application: Use two or more chisels per row and in such a manner as to treat both sides of the row with the chisel injection lines no closer to the plant line than 4 inches.

Planting Instructions with Row Application: Direct seeding may be done at the time the nematicide is applied or at any time after a preplant application. Keep seed at least 4 inches away from chisel injection furrow to avoid poor stands due to loose soil in the area. This is particularly important with certain small seeded crops which may suffer stand reduction especially when soil becomes cool or wet following application of the nematicide. When setting transplants use following instruction: 1. Preplant treatment with 14-day wait, plant anywhere; or 2. Preplant treatment with less than 14-day wait, set plants at least 4 inches from chisel injection furrow; or 3. Planting time treatment, set plants at least 4 inches from chisel injection furrows.

For best control of nematodes, seal all row treated soil immediately after application and after any subsequent disturbance of the soil within 7 days after treatment. This can be done by tractor wheels or by listing or bedding followed by ring rollers, press wheels or light sprinkler irrigation.

IRRIGATION APPLICATION (Flood and Basin)

FUMAZONE 70E is recommended for use at the rate of 3.0 ppm of the active ingredient in sufficient water to give penetration to the desired depth. 0.79 gallons of FUMAZONE 70E per acre inch of irrigation water will provide 30 ppm by active ingredient. For the irrigation treatment, multiply 0.79 gallons by the number of

WARNING

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Read Complete Precaution on Rear Panel

of acre inches of water to be applied by the number of acres to be fumigated. For example, if an irrigation of 5 acre inches of water is planned and 10 acres are to be treated, the following calculation will give the number of gallons of FUMAZONE 70E required: Example: $0.79 \times 5 \times 10 = 39.5$ gallons.

In this case the dosage is equivalent to 3.95 gallons of FUMAZONE 70E per acre.

Irrigation Application Equipment: For best results FUMAZONE 70E should be applied by introducing the fumigant into the intake side of a centrifugal pump having a minimum output of not less than 4% of the total gallons of water of the irrigation system. The fumigant should be metered directly into the pump from its original container through a simple gravity flow applicator. There are several excellent applicators of this type commercially available.

Water Requirements to Bring Soil Moisture from the Wilting Point to Field Capacity: It has been determined that this fumigant in irrigation water will penetrate the soil to approximately one half of the depth of the water penetration. Therefore sufficient water should be applied to bring the field capacity to a depth about twice that desired to be fumigated. On deep sandy soils this will require about 4 to 6 acre inches of water. The following table is offered as a guide to estimate the water requirements to bring soil moisture from the wilting point to field capacity.

Type of Soil	Acre Inches of Water Required For:	
	Top 6 to 8 inches of soil	Each additional foot of soil depth
Sand	1 to 1	1 to 1
Loam	1 to 2	1 to 2
Clay	2 to 3	2 to 3

APPLICATION SUGGESTIONS:

1. Apply the fumigant in all the water used in a given irrigation.
2. Do not use more treated water per acre in one irrigation than will provide the maximum dosage of FUMAZONE 70E recommended for each crop listed in the accompanying Dosage and Use Recommendations table.
3. Always determine the water delivery rates of the pump and canal or ditch before irrigation. This determination is necessary to assure accurate dosage which is based on total volume of irrigation water.
4. Irrigate with a maximum amount of water in a minimum period of time. Best results are obtained when irrigation time is two hours or less.
5. For best results cover as much of the soil surface as possible with the treated irrigation water.
6. The necessity for treatment of perennial crops is dependent upon reestablishment of damaging nematode populations. Overall treatment will usually give 2 to 4 years control of nematodes. To avoid the possibility of exceeding the residue tolerances of food crops, do not treat by irrigation more often than once a year.

DRENCH APPLICATION (For Professional Use Only)

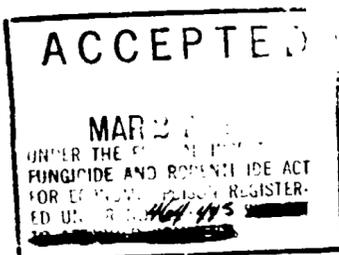
For overall treatment of established turf, lawns, golf course fairways and greens, and other ornamental and recreational turf grass areas, and around tolerant ornamental plants, thoroughly mix the required amount of FUMAZONE 70E with water and apply the resulting emulsion evenly with a sprinkling can or hose proportioner. Use at least 20 gallons of water for each 100 square feet of area to be treated. After application of fumigant apply enough clear water to wash the foliage and wet the soil to a depth of 8 inches. To improve control aerate and wet the soil thoroughly before application of fumigant. **NOTE:** Because of possible vapor hazard, make the treatment during cooler hours of the day. If exposure to vapors is likely, wear or have available suitable respiratory protection as recommended on this label.

APPLICATION WITHIN CONFINED AREAS

FUMAZONE 70E may be used in confined areas, such as greenhouses, provided the area is well ventilated during and after application. Wear or have available suitable respiratory protection as recommended on this label if there is any likelihood of exposure to vapors.

SYMPHYLAN CONTROL: To control symphyllans use only overall application at the dosages recommended in the table. Apply during late summer or early fall when the soil is warm.

Bacterial Canker and Decline of Peach Trees: Use as a post-plant treatment on light sandy soil. Apply FUMAZONE 70E either by overall chisel application at the rate of 4.9 gallons per acre or by flood irrigation application using 5 to 6 inches



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REVISIONS INCLUDE: (1) FORMULATION CHANGE (2) DORSAL AND REAR LABEL REVISED (3) GENERAL REVISIONS THROUGHOUT LABEL