



SHELL D-D/PIC® SOIL FUMIGANT



A preplant soil fumigant for controlling many subterranean plant parasitic nematodes, wireworms, symphylans and reduces the symptoms of soil infesting fungi such as Soil Rot (Soil Pox), Granville Wilt, Black Root Rot, Black Shank, Verticillium Wilt and Pyrenochaeta Terresters (Pink Root of Onions). Aids in the control of peanut pod rot disease.



KEEP OUT OF REACH OF CHILDREN.

DO NOT USE, POUR, SPILL OR STORE NEAR HEAT OR OPEN FLAME. CALL PHYSICIAN IN CASE OF ACCIDENTS. MAY BE FATAL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN. HAZARDOUS VAPOR AND LIQUID. CAUSES BURN OF SKIN OR EYES. DO NOT GET IN EYES, ON SKIN OR ON CLOTHING. COMBUSTIBLE LIQUID. DO NOT BREATHE VAPOR. USE ONLY WITH ADEQUATE VENTILATION. KEEP CONTAINER CLOSED. NOT FOR USE OR STORAGE IN OR AROUND THE HOME. DO NOT CONTAMINATE FEED AND FOODSTUFFS. DO NOT STORE NEAR SEEDS, FERTILIZERS OR PLANTS. DO NOT APPLY NEAR LIVING PLANTS.

In case of contact, IMMEDIATELY remove all contact with clothing and shoes and wash skin thoroughly with soap and plenty of water. For eyes, flush with flowing water for at least 15 minutes and get medical attention. Get out of contaminated clothing or shoes until entirely free of chemical odor. In case of accidental spillage in closed areas, have available a self-contained breathing apparatus or a mask or a respirator of a type passed by the U. S. Bureau of Mines for chlorinated C₂ hydrocarbons protection.

If inhaled, remove to fresh air. Use artificial respiration if breathing has stopped. Get immediate medical attention. Keep patient absolutely quiet. If unconscious, give a doctor. Induce vomiting by giving an emetic such as 2 tablespoonfuls of table salt in a glass of warm water.

GENERAL DIRECTIONS

Use D-D/PIC® Soil Fumigant only as a preplant treatment to control NEMATODES such as meadow nematode, root knot, citrus burrowing, ring, spiral, sting, pin, stubby root, stylet, dagger and cyst formers (golden and sugar beet), also wireworms, garden centipedes, (symphylans) to vegetables such as beans, beets, carrots, celery, cole crops (cauliflower, cabbage, etc.), corn, cucurbits (cucumbers, melons, etc.), lettuce, onions, parsnips, peas, peppers, spinach, sweet potatoes, white potatoes, tomatoes, turnips and field crops such as cotton, mint, peanuts, sugar beets, and tobacco, and other high value crops such as floral crops, pineapple, strawberries, citrus and deciduous orchard planting sites, ornamentals and forest nursery crops. For best results with annual crops, treat soil each year. Do not use on extremely heavy clay soil. DISEASE For the control of Black Shank, Black Root Rot and Granville Wilt in tobacco, use 12 gallons per acre in the row (42" apart) and for broadcast treatment use 28 to 32 gallons per acre. For the control of Soil Rot (Soil Pox) in sweet potatoes use 12 gallons per acre in row treatment where rows are 42" apart and 28 to 32 gallons per acre broadcast treatment. For the control of Verticillium Wilt of white potatoes and mint and Pink Root of onions, use a broadcast treatment of 28-32 gallons per acre. As an aid in controlling peanut pod rot disease, apply 3-6 gallons per acre on 36 inch centers using a single chisel and injecting to an 8 inch depth.

(CHLORPICRIN MIXTURE)

ACTIVE INGREDIENTS

Chlorinated C₂ hydrocarbons, including 1,3-dichloropropene, 1,2-dichloropropane, and related hydrocarbons

Chloropicrin

TOTAL

BY WEIGHT

85%

15%

100%

(D-D/PIC® Soil Fumigant weights 10.43 lbs. per gallon)
EPA Registration No. 201-350

DOSAGE RECOMMENDATIONS

| Crop | Type of Treatment | Soil Type | Gallons Per Acre (1) |
|--|-------------------------|-------------------------|----------------------|
| Shallow Rooted Plants: Field Crops Floral Crops Grasses and Turf Small Fruits Vegetables Ornamentals | Row (42") | Mineral | 7½ to 10 |
| | | Muck or Peat | 15 to 20 |
| | Over-all (or broadcast) | Mineral | 15 to 25 (2) |
| | | Muck or peat | 40 (3) to 60 |
| Strawberries | Over-all | Mineral | 40 to 60 |
| Tobacco | Row (42") | Mineral | 12 |
| Sugar Beets Root-Knot Nematode | Row (42") | Sandy, or Sandy Loam | 6 |
| | Over-all | | 20 to 25 |
| Sugar Beet Nematode | Row (42") | Sandy, or Sandy Loam | 15 |
| | Over-all | | 20 to 30 |
| Pineapple | Row (42") | Mineral | 40 to 60 |
| Citrus-Florida (4) | Over-all | Sandy | 60 |

| Nursery and Field: Citrus Fruit Trees Deciduous Fruit Trees Forest Trees Grapes Nut Trees Ornamentals (deep rooted) | Soil Type | Overall: Gallons Per Acre to Penetrate Various Depths | | | |
|--|---------------|---|-------|-------|-------|
| | | 3 ft. | 4 ft. | 5 ft. | 6 ft. |
| (over-all rate) | Mineral Soils | 25 | 35 | 45 | 55 |
| | Sand | 25 | 35 | 45 | 55 |
| | Sandy Loam | 45 | 50 | 60 | 80 |
| | Silt Loam | 70 | 85 | 105 | 125 |
| | Clay Loam | 90 | 115 | 140 | 170 |

- (1) Use the higher rates in heavier soil.
- (2) For cyst forming nematodes increase dosage to 30 gallons.
- (3) For muck soil containing less than 30% organic matter use 30 gallons per acre.
- (4) For burrowing nematode in citrus, inject on 18-inch centers 12 inches deep. Keep free of plants susceptible to burrowing nematodes for 2 years before replanting to citrus.

WHEN TO TREAT

Treat in spring or fall or whenever soil conditions are suitable. Soil temperature 6 inches deep should be between 40 and 80 F. (Cold or wet soils retain fumigant longer. Dry or hot soils release fumigant too rapidly.) Fall treatment is suggested for land to be planted to early planted crops such as celery, tomatoes, and nursery stock. Early fall treatment allows planting a fall cover crop.

SOIL PREPARATION

For best fumigant penetration and soil sealing, plant remains should be worked into the soil long enough before treatment so that roots are well rotted. The soil should be in good seedbed condition, with enough moisture for good seed germination. Deep tillage, 12 to 18 inches, often improves results.

APPLICATION

Over-all (Broadcast) Application: Apply with chisel or plow sole equipment. Apply in uniform streams 16 to 12 inches apart and 6 to 8 inches deep in the soil. With chisel application, seal chisel channels with a drag, ring roller, or press wheel behind the applicator. With plow sole applications, disc immediately to break clods and then seal with roller or drag.

NET CONTENT: 30 GALLONS

Row (Band) Treatment. Adjust injection chisels to same spacing as planter. Inject at least 6 to 8 inches below the final soil surface. Seal with roller or drag. Plant directly in treated strips.

Citrus Replanting Sites. Space chisels 18 to 20 inches wide and inject 12 to 14 inches deep over all.

For Deciduous Orchards, Forest and Nursery Crop Planting Sites. Treat large areas over-all or in strips 10 feet wide. Inject 10 to 12 inches deep with spacings 12 inches apart. Seal by pressing soil with the foot.

WHEN TO PLANT

Under normal conditions, a waiting period of one week for each 10 gallons per acre of D-D/PIC® Soil Fumigant used should be allowed. Allow additional time before planting if temperatures are below 60°F or if there has been heavy rain. Do not plant until the fumigant odor has left the soil.

If, during the exposure period, there are heavy rains, followed by low temperatures, work the soil several times.

Soil treated with massive doses of fumigant before planting, such as for deep-rooted tree and shrub planting sites, requires a 3 to 6 months waiting period. Before planting, plow or open planting hole to thoroughly aerate soil.

Consult local State Agricultural Extension Service regarding local conditions.

To avoid reinfestation of treated soil, do not use transplants, tools, or crop remains that could carry soil borne pests from infested land. Clean rig carefully before using.

NOTE: Symphylans (garden centipedes) and Wireworm Treatment:

To control symphylans (garden centipedes) and wireworms on beans, beets, carrots, cole crops, corn, onions, parsnips, peas, sweet potatoes, tomatoes, turnips, strawberries, peanuts and nursery crops. Symphylans: Use only over-all (broadcast) at 30 or more gallons per acre and apply during late summer or early fall when soil is warm. Wireworms: Use only over-all (broadcast) treatment at 25 or more gallons per acre.

CAUTION: Note carefully. Fumigation may temporarily raise the level of ammonia nitrogen soluble salts in the soil. This is most likely to occur when heavy rates of fertilizer and fumigant are applied to soils that are either cold, wet, acid, or high in organic matter. To avoid injury to plant roots, fertilize as indicated by soil tests made after fumigation. To avoid ammonia injury or nitrate starvation, or both, to crops, 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, sugarcane, and pineapple are tolerant to ammonia and the above rule does not apply to them. Loam, highly acid soil before fumigation stimulates nitrification and reduces the possibility of ammonia toxicity.

PRECAUTIONS IN USING

Wear goggles and polyethylene gloves when handling material. Wash with soap and water after handling and before eating or smoking. Do not store in or use containers or equipment made of aluminum, magnesium or their alloys. Store in cool place away from dwellings. Avoid re-fumigating treated soil. After use, always empty and clean applicator thoroughly with kerosene or fuel oil. Avoid using water in equipment. To protect birds and wildlife, do not spill or empty containers, or rinse equipment or containers into streams, ponds or other bodies of water.

Do not reuse empty containers. Destroy when empty. Keep empty container away from heat or open flame. Containers should be disposed of first by running them by punching holes in them and burying with wastes on non-crop lands away from water supplies.

NOTICE OF WARRANTY

SHELL CHEMICAL COMPANY MAKES NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PURPOSE, OR OTHERWISE, EXPRESS OR IMPLIED, concerning this product or its uses which extend beyond the use of the product under normal conditions in accord with the statements made on the label.

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