



# FCX BROZONE\* SOIL FUMIGANT

A preplant soil fumigant for the control of nematodes, insects and weeds in certain plant beds, nurseries and certain field crop areas. Typical nematodes controlled are root-knot, lesion, dagger, stunt, spiral, cyst formers, lance, sting pin, and certain other species. Insects such as wireworm and white grubs in the soil at the time of treatment are also controlled. Examples of weeds controlled are chickweed, pigweed, nutgrass, crabgrass, goosegrass, crawfootgrass, barnyardgrass, purslane, wild morning glory, and many other broadleaved weeds and grasses. BROZONE soil fumigant will give excellent performance in fruit and forest tree, ornamental and turf nurseries, also for growing annual and perennial flowers, tomato, tobacco and strawberry plant beds, and in soil where strawberries and tomatoes are to be grown for food.

## DIRECTIONS FOR APPLICATION AND PLANTING

**WHEN TO TREAT:** Treatments can be made in the spring, summer, or fall whenever soil conditions are suitable. In the warm states, late summer or early fall treatments are best for plants to be planted in early spring crops.

**SOIL PREPARATION:** To facilitate fumigant penetration, plant refuse should be worked into the soil and then allowed to decompose before treating. Soil must be moist and workable (seed bed condition) warm, preferably 50 to 60 F. at a depth of 12 to 18 inches when the fumigant is applied. Good germination. Do not treat if the soil temperature is below 45 F. at the five inch level. Pretreatment tillage to a depth of 12 to 18 inches often improves results, especially in heavy or muck soils.

**APPLICATION:** A special inexpensive chisel-type applicator is used to inject BROZONE soil fumigant about 5-8 inches into the soil. Due to the volatility of this fumigant, treated areas must be covered with polyethylene film or other suitable tarpaulin as soon as possible after application—preferably within 20 minutes. Lay film manually or with a mechanical tarp layer. BROZONE soil fumigant is toxic to plants. Therefore, do not apply to soil containing roots of desirable plants. The edges of the tarpaulin cover should be at least 18 inches away from the foliage drip-line of desirable plants.

Cylinders containing BROZONE are pressurized to expel the entire contents through metering orifices. No additional pressure is necessary for application of this fumigant.

## EXPOSURE PERIOD AFTER APPLICATION

For soil temperatures above 60 F., the treated soil should be covered for at least 48 hours to insure maximum fumigant diffusion. For soil temperatures below 60 F., extend the exposure period to 3 or 4 days for best results. In all instances, best results are obtained from fall applications where the covers are left on all winter.

## DOSAGE RECOMMENDATIONS

Use	Pounds/Acre
Seed and transplant beds	
Tomato, tobacco, forest trees	500
Strawberries and tomatoes (For fruit production)*	350
Nurseries	
Floral crops and turf	500
Woody perennials including fruit and forest trees, or ornamentals	600

\* When transplants are for fruit production allow at least two weeks between fumigation and planting.

Consult the following table to determine the proper pressures and cylinder

## To Control Many Weeds, Grasses, Nematodes And Insect Pests In Plant Beds And Nurseries

Active Ingredients: **Methyl Bromide** ..... 68.6%  
**Chloropicrin** ..... 1.4%  
Inert Ingredients: Petroleum hydrocarbons ..... 30.0%

EPA Registration No. 1598-159

EPA No. 1598-159-1



### DANGER - POISON



KEEP OUT OF REACH OF CHILDREN

HIGHLY VOLATILE LIQUID

LIQUID MAY CAUSE BURNS

VAPORS MAY BE FATAL IF INHALED

Do Not Breathe Vapor -:- Keep Away from Heat

Do Not Get in Eyes, on Skin, on Clothing

In case of contact, immediately remove all contaminated clothing including shoes, adhesive or other bandages. Wash skin well with soap and plenty of water, flush eyes with plenty of water for at least 15 minutes, for eyes get medical attention. If skin irritation or blisters develop get medical attention. Free contaminated clothing and shoes of chemical before re-use.

If a person experiences any ill effects from the breathing of the vapors of this product, remove patient to fresh air immediately, keep him warm and quiet. Give artificial respiration if breathing stops. Call a physician immediately.

SEND FOR A DOCTOR IMMEDIATELY IN CASE OF AN ACCIDENT

ANTIDOTE: No known antidote; treat symptomatically

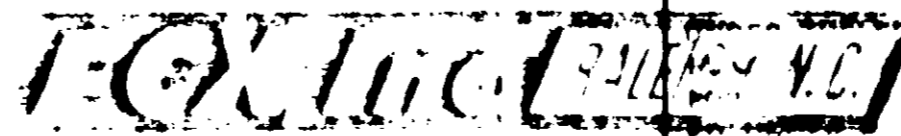
KEEP CHILDREN AND ANIMALS AWAY FROM PLOTS UNDER TREATMENT

SEE REMAINDER OF WARNINGS AND CAUTIONARY STATEMENTS ON SIDE PANEL

\*Brozone Trademark of The Dow Chemical Company

Net Weight 125 U.S. Pounds

MANUFACTURED BY



sizes required to deliver the desired dosage per acre. These calibrations based on the use of 2 or more chisels spaced 12 inches apart.

## DOSAGE CALIBRATION CHART

Dosage Pounds Per Acre	2 Miles Per Hour		3 Miles Per Hour	
	Orifice Diameter Inches	Approximate Pressure psi	Orifice Diameter Inches	Approximate Pressure psi
350	.043	31	.055	31
500	.055	30	.063	30
600	.055	33	.063	33

## WHEN TO PLANT AFTER TREATMENT

Crops can usually be sown 2 to 3 days after the fumigation. For transplants, wait at least 7 to 10 days. For strawberries, wait at least 10 to 14 days. For other crops, wait at least 2 to 3 weeks. For strawberries and tomatoes, wait at least 2 to 3 weeks. For other crops, wait at least 2 to 3 weeks. For other crops, wait at least 2 to 3 weeks.

## USE PRECAUTIONS

**NOTE: CAUTION:** Fumigation may temporarily reduce the soil pH and cause a loss of soil fertility. This is most likely to occur when the fumigant is applied to soil containing organic matter. To avoid this, apply the fumigant to soil that has been made slightly alkaline by the application of lime. Fumigation of soil containing organic matter should be avoided. Both soil and fumigant are highly volatile. Do not breathe vapors. Do not get in eyes, on skin, on clothing. Do not get in eyes, on skin, on clothing. Do not get in eyes, on skin, on clothing.

Avoid inhalation of treated soil. Do not walk from treated areas. Do not use treated soil for transplants or crop nurseries in soil-borne plant-parasitic pests and weeds. Do not use treated soil for transplants or crop nurseries in soil-borne plant-parasitic pests and weeds. Do not use treated soil for transplants or crop nurseries in soil-borne plant-parasitic pests and weeds.

Under certain conditions BROZONE soil fumigant may be a source of hydrogen cyanide. Do not use containers or use of equipment made of metal, magnesium, or their alloys. Clean application equipment after use by flushing thoroughly with diesel oil or kerosene. Store BROZONE gas in tightly closed cylinders in a cool place away from dwellings, reach of children.

DO NOT GORE. BROZONE SOIL FUMIGANT IS A HIGHLY VOLATILE LIQUID. In case of trouble or other emergency where high concentrations of vapor may be present, wear a full face gas mask fitted with a black canister as approved by the National Fire Protection Association. Do not breathe vapors. Do not get in eyes, on skin, on clothing. Do not get in eyes, on skin, on clothing. Do not get in eyes, on skin, on clothing.

# BROZONE\* SOIL FUMIGANT

To Control Many Weeds, Grasses,  
Nematodes And Insect Pests  
In Plant Beds And Nurseries

Active Ingredients:  
Methyl Bromide ..... 68.6%  
Chloropicrin ..... 1.4%  
Inert Ingredients: Petroleum hydrocarbons ..... 30.0%

EPA Registration No. 1598-159  
EPA Est. 1524-0-1

**DANGER - POISON**



KEEP OUT OF REACH OF CHILDREN

HIGHLY VOLATILE LIQUID  
LIQUID MAY CAUSE BURNS

VAPORS MAY BE FATAL IF INHALED

Do Not Breathe Vapor -- Keep Away from Heat

Do Not Get in Eyes, on Skin, on Clothing

In case of contact, immediately remove all contaminated clothing including shoes, adhesive or other bandages. Wash skin well with soap and plenty of water, flush eyes with plenty of water for at least 15 minutes, for eyes get medical attention.

If skin irritation or blisters develop get medical attention. Free contaminated clothing and shoes of chemical before reuse.

If a person experiences any ill effects from the breathing of the vapors of this product, remove patient to fresh air immediately, keep him warm and quiet. Give artificial respiration if breathing stops. Call a physician immediately.

SEND FOR A DOCTOR IMMEDIATELY IN CASE OF AN ACCIDENT

ANTIDOTE: No known antidote, treat symptomatically  
KEEP CHILDREN AND ANIMALS AWAY FROM PLOTS UNDER TREATMENT

SEE REMAINDER OF WARNINGS AND CAUTIONARY STATEMENT ON SIDE PANEL

\*Brozone Trademark of The Dow Chemical Company

Net Weight 125 U.S. Pounds

MANUFACTURED BY

**EQNITIC** **RAILROAD** **N.C.**

sizes required to deliver the desired dosage per acre. These calibrations are based on the use of 2 or more chisels spaced 12 inches apart.

DOSAGE CALIBRATION CHART

Dosage Pounds Per Acre	Tractor Speed			
	2 Miles Per Hour		3 Miles Per Hour	
	Orifice Diameter In Inches	Approximate Pressure psi	Orifice Diameter In Inches	Approximate Pressure psi
350	.043	31	.055	32
500	.055	30	.063	36
600	.055	33	.063	41

### WHEN TO PLANT AFTER THE EXPOSURE PERIOD

Crops can usually be seeded 2 to 3 days after the covers are removed. For transplants, seedlings the soil 7 to 10 days after the covering is removed. To avoid possible injury due to a residual fumigant, do not plant out 2 or more days after treatments of strawberries and tomatoes for soil fumigation in fumigated fields. If rains or soil temperatures below 50 F. occur during aeration, delay seeding or planting until the soil has returned to a temperature with suitable moisture conditions for germination.

### USE PRECAUTIONS

NOTE CAREFULLY: Fumigation may temporarily raise the level of ammonia nitrogen and nitrate salts in the soil. This is most likely to occur when heavy applications of fertilizer and fungicides are added to soils that are either acid, with a high level of organic matter. To avoid injury to plants, fertilizers as indicated by plant analysis lists made after fumigation. To avoid ammonia injury or nitrate starvation, both, avoid using fertilizers containing ammonium ions and urea, and fertilizers containing nitrate nitrogen until after the soil is well aerated and soil temperatures are above 55 degrees F. Caution: The above rule does not apply to them. Liming highly acid soils before fumigation stimulates nitrification and reduces the availability of ammonia-nitrogen. Fumigation of soil may also cause phosphorus deficiency. To insure adequate available phosphorus, add and work into the soil 500 pounds of superphosphate per acre before fumigating.

Avoid reinfestation of treated soil. Do not walk from untreated areas into treated areas. Do not use tools, equipment, transplants or crop remains infested with soil-borne plant parasitic pests and weed seeds in the fumigated areas. If the treated area is in a location where heavy traffic may occur, flagging or warning, place a fence or make a trench around the area to be fumigated and keep away from the treated position. Suitable wooden frames, hardware, and other plant beds are also satisfactory for protecting this type of beds and plantings.

CAUTION: Foliage or other tender structures and tomatoes should not be grown to maturity in soil treated with BROZONE. Under certain conditions BROZONE soil fumigant may be severely corrosive to certain metals. Do not use containers or application equipment made of aluminum, magnesium or zinc alloys. Clean application equipment immediately after use by flushing thoroughly with diesel oil or kerosene. Store BROZONE soil fumigant in tightly closed containers in a cool place away from dwellings and out of reach of children.

DO NOT use in a confined space unless the container is properly covered. In case of equipment trouble or if the fumigant vapor which may be encountered, wear a full face gas mask fitted with a black canister as approved by the U. S. Bureau of Mines for use with organic vapors. NOTE: Some reports state that the product conforms to its chemical description and is not harmful to the plants as stated on the label when used in accordance with directions. However, it is not possible to use this warranty for any other variety of MERICANTAS. For more information FOR A PARTICULAR PURPOSE, express your request to the manufacturer. Do not rely on the label instructions, or under any conditions, or under any circumstances, to rely on the label and the manufacturer's risk of any such use.

nematodes, insects and weeds in crop areas. Typical nematodes include spiral, cyst formers, etc. such as wireworm and white grub are also controlled. Examples of weeds controlled include nutgrass, crabgrass, goosegrass, wild morning glory, and other weeds. BROZONE soil fumigant will control tree, ornamental and turf nematodes. Typical nematodes include root-knot, tobacco, and other nematodes. Strawberries and tomatoes are also controlled.

### APPLICATION AND PLANTING

Apply in the spring, summer, or fall in the northern states; late summer or fall in the southern states. Plants should be planted to early spring or late summer. If plants do not germinate, plant refuse should be removed and replaced with fresh soil. Plants should be planted in warm, preferably 50 to 60 degrees F. soil. Seedlings below 45 degrees F. at the five inch to 18 inches often improves germination.

A spray-type applicator is used to inject the fumigant into the soil. Due to the volatility of the fumigant, the soil should be covered with a polyethylene tarpaulin as soon as possible after application. The tarpaulin should be sealed with a mechanical tarpaulin sealer. The edges of the tarpaulin should be sealed with a mechanical tarpaulin sealer. The edges of the tarpaulin should be sealed with a mechanical tarpaulin sealer. The edges of the tarpaulin should be sealed with a mechanical tarpaulin sealer.

### APPLICATION

The treated soil should be covered for at least 3 to 4 days for best results. In some cases, a longer exposure may be necessary to expel the entire contents of the container.

### CALIBRATIONS

the following dosage table

	Pounds/Acre
500	350
500	600

proper pressures and tractor speeds.