

PM-90

Reg # 10330-2

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

Mr. A. G. Vilkas  
Praxair, Inc.  
39 Old Ridgebury Road  
Danbury, CT 06810-5113

AUG 2 1995

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Dear Mr. Vilkas,

Subject: Reregistration - Worker Protection Standard (WPS)  
Ethylene Agricultural Grade  
EPA Registration No. 10330-2  
Your Submission Dated January 9, 1995

We have reviewed your draft labeling submitted for the reregistration of ethylene, which was revised per our letter of December 29, 1994. In addition, we have received the faxed copy of your "collar" label, which deletes the word "warning", to comply with regulations requiring only one signal word on pesticide labeling.

The labeling referred to above, submitted in compliance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable with the following change:

1. Add the title "PHYSICAL OR CHEMICAL HAZARDS" before the paragraph beginning with "Extremely flammable. Contents under pressure... etc."

A stamped copy is enclosed for your records. Five (5) copies of the final printed labels must be submitted prior to releasing the product for shipment.

Sincerely,

A handwritten signature in cursive script that reads "Janet L. Andersen".

Janet L. Andersen, Ph.D.  
Acting Director  
Biopesticides and Pollution  
Prevention Division  
(7501W)

Enclosure

Label Statements Added per Supplement Four-F, Labeling Guidance for Ethylene Fumigant Products

ETHYLENE

AGRICULTURAL GRADE

Fumigant  
Active Ingredient:

Ethylene.....100%

CAS: 74-85-1



DANGER: FLAMMABLE HIGH PRESSURE GAS. MAY FORM EXPLOSIVE MIXTURES WITH AIR. MAY CAUSE FROSTBITE. MAY CAUSE DIZZINESS AND DROWSINESS.

ODOR: SWEET

PELIGRO

Si Usted no entiende la etiqueta, busque a alguien para que se la explique a Usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

Keep out of reach of children

DANGER!  
STATEMENTS OF PRACTICAL TREATMENT

IF IN EYES: Flush with plenty of water. Call a physician.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

PRECAUTIONARY STATEMENTS:

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER! Harmful if inhaled. When discharged from a cylinder in a confined space ethylene gas replaces the air and may be harmful. Do not breathe vapors. Asphyxiant. Liquified or pressurized gas can cause frost burns. Do not get in eyes or on skin.

ACCEPTED  
with COMMENTS  
in EPA Letter Dated

Aug 2, 1995

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear: Long-sleeved shirt and long pants; Shoes and socks; Waterproof gloves; Face -sealing goggles when handling cylinder or any application equipment is under pressure; If entry into an unventilated treatment area is necessary, handlers must wear a supplied-air respirator with MSHA/NIOSH approval number prefix TC-19C or a self contained breathing apparatus(SCBA) with MSHA/NIOSH approval number prefix TC-13F.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

\*\*\*\*\*  
USER SAFETY RECOMMENDATIONS

Users should:

- . Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- . Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- . Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

\*\*\*\*\*

Extremely flammable. Contents under pressure. Keep away from fire, sparks and heated surfaces. Exposure to temperature above 130 F may cause bursting. Do not puncture or incinerate container. Use with equipment rated for cylinder pressure. Close valve when not in use and when empty. Cylinder temperature should not exceed 125°F (52°C). Use in accordance with tag attached to cylinder valve and Praxair Form L-4598 (MSDS).

LEAK: Evacuate area and keep personnel upwind. Shut off all sources of ignition. Shut off leak if without risk.

FIRE: Do not extinguish burning gas if flow cannot be shut off immediately. Use water spray or fog nozzle to keep cylinder cool. Move cylinder away from fire if without risk.

IN CASE OF EMERGENCY: Call 1-800-645-4633

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ENVIRONMENTAL HAZARDS

Do not apply directly to water, or areas to where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

FOR AGRICULTURAL AND INDUSTRIAL USE ONLY

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 C.F.R. § 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

DOT/IMO Shipping Name: Ethylene, Compressed UN1962

EPA Reg. No. 10330-2  
EPA Est. No. 10330-LA-1

BATCH

Praxair, Inc.  
Danbury, CT 06810-5113

SGB-03400 (1/94)

Read the attached Directions for Use tag before using this product.

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SIZE 6" X 7-1/4"  
PRAXAIR

For rooms up to 5,000 cu. ft. in volume: 1/2 cu. ft. per min.  
For rooms between 5,000 and 10,000 cu. ft.: 1 cu. ft. per min.  
For rooms over 10,000 cu. ft.: 2 to 2-1/2 cu. ft. per min.  
**THOROUGH VENTILATION ESSENTIAL.** It is customary to treat the fruits twice each day, usually in the morning and at night. In many cases, better results are obtained from four treatments per day at 6-hour intervals.

**FRUIT RIPENING**

**RECOMMENDED DOSAGE:** To be used in air in a tightly enclosed treatment room. Do not degreen until time to ready the fruit for market.

CULTURE	PPM	TEMP	RH	USE	TIME OF EXPOSURE
BANANAS	1000	85-70°F	80%	To initiate degreening & ripening	3-4 days
CITRUS	5	80-80°F	80%	To initiate degreening	2 1/2 - 5 days
Grapefruit		80-80°F		Use adequate ventilation before each application	APPLY Early
Orange		80-80°F			
Tangerines	1	70°F	80%		
Lemon		70°F			
MELONS	1000	85°F		To initiate degreening	3-4 days
Honeydew					
PEARS	1000	85°F		To initiate degreening & ripening use adequate ventilation before each application	4-8 days
Barlett					Apply Early
Bosc					
PERSEIMON	1000	85°F	80%	To initiate degreening, to remove stringency and to soften	2 days
PINEAPPLES	1000	85°F	40%	To initiate degreening	3-4 days
TOMATOES	100-150	85-70°F	85-85%	To initiate degreening & ripening	6 days
Observe Daily					
WALNUTS	1000	70-80°F	Low	To loosen hulls thoroughly ventilate before each application	2-1/2 - 3-1/2 days
Apply Early					

**PINEAPPLE PLANT 2.5 lb./acre.** To induce flowering, when plant is mature apply as pressure spray using 500-1,200 gallons water/acre vegetative growth. Use of china clay, bentonite or other suitable absorbent in suspension in the water is recommended.

Do not apply directly to water or to areas where surface water is present or to terrestrial areas below the minimum height of tank. Do not contaminate water when disposing of equipment washwater or waste.

Not for use in greenhouses or other enclosed areas.

**WITCHWEED CONTROL - CROPS:** Corn, Cotton, Peanuts, Soybeans

**APPLICATIONS DATES:** May through July  
**PRECONDITIONING PERIOD:** The witchweed seeds must be exposed to adequate moisture and temperatures above 72°F for a period of at least two weeks prior to application of the ethylene.

**APPLICATION:** A soil injector is used to apply the ethylene and the gas is delivered from the cylinder through a regulator and flowmeter. Shanks attached to the tool bar release the gas approximately 6 to 10 inches below the soil surface. The maximum shank spacing will not exceed 40 inches. The rate of application is 1.5 pounds per acre (1.5 pounds per acre equals 19.47 cubic feet). The treatment rate can be calculated using the following formula (Tractor speed, MPH) x (0.12) x (Treatment width feet) x (Recommended application rate, cubic feet per acre). Flow rate in cubic feet per hour.

**NOTE:** The flowmeter is used to measure the flow rate in cubic feet per hour of the gas applied. The ethylene may be broadcast throughout an injected field or it may be injected between the crop rows.

Do not till the soil within 2 hours after application. Witchweed commonly occurs in sandy soil, however, the use of ethylene to control witchweed is not restricted to soil texture. In coarse sandy soil the ethylene disperses in a 48-inch radius from the point of injection, while a 30 inch radius of dispersal is found in clay soil.

For use by or under supervision of USDA Personnel only. Sequential applications with other herbicides may result in crop injury. Injection between crop rows without additional weed control techniques will give no witchweed control in current season.

**TECHNICAL REFERENCES:** "A Witchweed Seed Germination Stimulant", Robert E. Eples, USDA Witchweed Development Laboratory, Whiteville, N.C.

For use by or under the supervision of Federal and/or State personnel in accordance with the U.S. Department of Agriculture's manual instructions for witchweed eradication or control.

**STORAGE AND DISPOSAL:** Store and use with adequate ventilation. Cylinders should be stored in a well ventilated area. Return cylinders to supplier.

**PRAXAIR**

Danbury, CT 06810 - 5113  
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BNP-2500

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DEM G-120B  
ALL COPY BLACK  
D.O.T. DIAMOND-RED  
BAR ACROSS LOWER EDGE-VERGE PMS 445  
PRAXAIR LOGO- GREEN PMS 354  
EDUCTOR CHIRCLE-GREEN PMS 344

ETHYLENE,  
COMPRESSED  
UN 1982

ETHYLENE AGRICULTURAL GRADE

ACTIVE INGREDIENT-ETHYLENE  
100%  
NET CONTENT



*Deliberate work in compliance*

37 LBS. (16.8 KG)  
NET WEIGHT (16 kg)

OVERLAY →

30 LBS. (13.6 KG)  
NET WEIGHT (13 kg)

Composites

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