

UNION
CARBIDE

UNION CARBIDE CORPORATION

Linde Division

WARNING: Breathing of vapors harmful. May cause eye injury and skin irritation. Avoid contact with skin, eyes and clothing. In case of contact, immediately remove all contaminated clothing, including shoes, and flush skin or eyes with plenty of water for at least fifteen minutes. Use only in accordance with directions in booklet attached to cylinder. L 2427 25

MADE IN U.S.A.

UNION CARBIDE CORPORATION, Linde Division
NEW YORK, N.Y.

NET CONTENTS 25 LBS

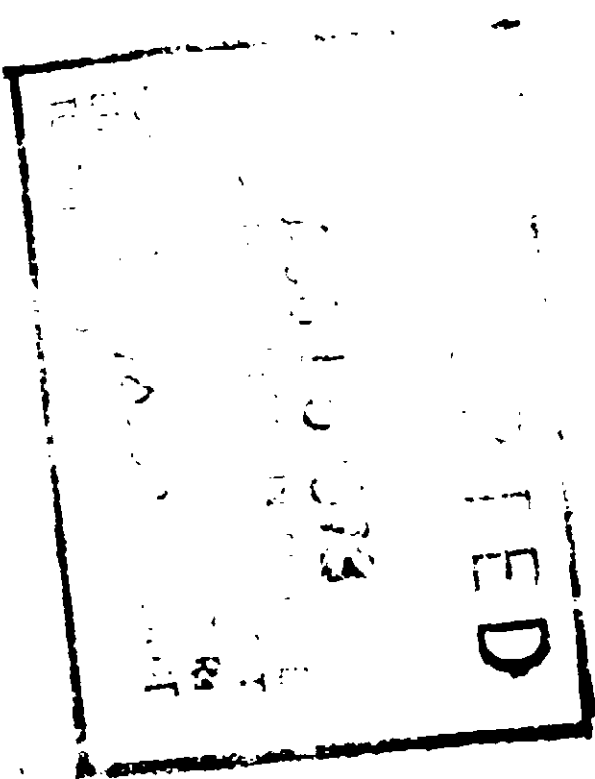
OXYFUME-12 FUMIGANT
STERILANT
TRADE MARK

ACTIVE INGREDIENT
ETHYLENE OXIDE 12% BY WEIGHT
INERT INGREDIENT
DICHLORODIFLUOROMETHANE 88% BY WEIGHT
FOR HOSPITAL AND INDUSTRIAL USE ONLY

water for at least fifteen minutes for eyes get medical attention. Use only in accordance with directions in booklet attached to cylinder. L 2427 25

EPA REG. NO. 10330-5

UNION
CARBIDE



NET CONTENTS 130 LBS

OXYFUME-12 FUMIGANT
STERILANT
TRADE MARK

ACTIVE INGREDIENT
ETHYLENE OXIDE 12% BY WEIGHT
INERT INGREDIENT
DICHLORODIFLUOROMETHANE 88% BY WEIGHT
FOR HOSPITAL AND INDUSTRIAL USE ONLY

water for at least fifteen minutes for eyes get medical attention. Use only in accordance with directions in booklet attached to cylinder. L 2427 1

EPA REG. NO. 10330-5

UNION
CARBIDE

NET CONTENTS 2000 LBS

OXYFUME-12 FUMIGANT
STERILANT
TRADE MARK

ACTIVE INGREDIENT
ETHYLENE OXIDE 12% BY WEIGHT
INERT INGREDIENT
DICHLORODIFLUOROMETHANE 88% BY WEIGHT
FOR HOSPITAL AND INDUSTRIAL USE ONLY

water for at least fifteen minutes for eyes get medical attention. Use only in accordance with directions in booklet attached to cylinder. L 2427 2

EPA REG. NO. 10330-5

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NEW YORK, N.Y.

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MADE IN U.S.A.

UNION CARBIDE CORPORATION, Linde Division
NEW YORK, N.Y.

NET CONTENTS 270 LBS

OXYFUME-12 FUMIGANT
STERILANT
TRADE MARK

ACTIVE INGREDIENT
ETHYLENE OXIDE 12% BY WEIGHT
INERT INGREDIENT
DICHLORODIFLUOROMETHANE 88% BY WEIGHT
FOR HOSPITAL AND INDUSTRIAL USE ONLY

water for at least fifteen minutes for eyes get medical attention. Use only in accordance with directions in booklet attached to cylinder. L 2427 270

EPA REG. NO. 10330-5

UNION
CARBIDE

MADE IN U.S.A. UNION CARBIDE CORPORATION, Linde Division
NEW YORK, N.Y.

WARNING: Breathing of vapors harmful. May cause eye injury and skin irritation. Avoid contact with skin, eyes and clothing. In case of contact, immediately remove all contaminated clothing, including shoes, and flush skin or eyes with plenty of water for at least fifteen minutes. Use only in accordance with directions in booklet attached to cylinder. L 2427 270

The image displays four labels for OXYFUME-12 FUMIGANT STERILANT, arranged in a circular pattern. Each label is for a different size of the product, with varying net contents and specific usage instructions. The labels are designed with a central header section, a warning section, and a usage section, all enclosed in a stylized border. The Union Carbide logo is prominently featured on each label.

Label 1 (Top Left): NET CONTENTS 25 LBS. The label includes a warning about breathing of vapors and a usage instruction to use only in accordance with directions in the booklet attached to the cylinder. The EPA REG. NO. 10330-5 is listed.

Label 2 (Top Right): NET CONTENTS 130 LBS. The label includes a warning about breathing of vapors and a usage instruction to use only in accordance with directions in the booklet attached to the cylinder. The EPA REG. NO. 10330-5 is listed.

Label 3 (Bottom Left): NET CONTENTS 2000 LBS. The label includes a warning about breathing of vapors and a usage instruction to use only in accordance with directions in the booklet attached to the cylinder. The EPA REG. NO. 10330-5 is listed.

Label 4 (Bottom Right): NET CONTENTS 270 LBS. The label includes a warning about breathing of vapors and a usage instruction to use only in accordance with directions in the booklet attached to the cylinder. The EPA REG. NO. 10330-5 is listed.

DO
NOT
DETACH

THIS
BOOK-
LET

DO NOT DETACH
THIS BOOKLET

WARNING

The Contents of this cylinder may become dangerous if exposed to flames or hot wires.

OXYFUME 12
TRADE MARK
Fumigant-Sterilant GAS

Active Ingredient
Ethylene Oxide 12% by weight

Inert Ingredient
Dichlorodifluoromethane 88% by weight

L2426 G

WARNING

To maintain effectiveness, STORE IN A COOL PLACE (preferably under 80°F). DO NOT STORE IN SUN. See shoulder label for additional warning.

OXYFUME 12
TRADE MARK
Fumigant-Sterilant Gas

Use at 60° F. or above

APPROXIMATE PRESSURE WHEN FULL
60 PSIG AT 70°F.

Exposure Times and Maximum Dosages at 70° F. or higher Atmospheric Gas Fumigation

FUMIGATION in gasproof Vaults or Chambers
Not effective if material is densely packed.

MATERIAL	POUNDS PER 1000 Cubic Feet	EXPOSURE TIME
Furs, Clothing	15 lb.	16 hours
Furniture, Spices, Natural seasonings	15 lb	16 hours

TRANSPORTATION EQUIPMENT

Vehicle	Capacity of Vehicle	Suggested Dosage	Exposure Time
Jet Plane	8800	88 lb	5 to 6 hrs.
Railroad Pass Cars	7000	70 lb	5 to 6 hrs
Buses	1680	17 lb.	5 to 6 hrs.

STERILIZATION IN EVACUATED SYSTEMS

For a 36 psig gas chamber, using a 26" Hg
pre-vacuum, requirements usually are:

Chamber Temperature	Chamber Pressure PSIG	ETO mg. L Corrected for Exposure Residual Air	Hours Time
100 F	7.3	640	6
100 F	14.7	878	5
130 F	7.3	610	3 1/2
130 F	14.7	830	3

STERILIZATION IN EVACUATED SYSTEMS

This mixture must be used in accordance with the Sterilizer Manufacturer's directions

PRECONDITIONING: Ethylene oxide will not kill dehydrated spores. Instruments must be precleaned to remove adhering tissue and serous exudates. All instruments or articles must be presoaked in water for a minimum of one (1) hour immediately prior to exposure with ethylene oxide. Articles that cannot be immersed in water must be sterilized in an ethylene oxide autoclave with a built-in automatic moisture-vapor pretreatment rehydration system.

Use a bacterial strip test for each batch, or conduct control sterility test for each batch.



UNION CARBIDE CORPORATION

LINDE DIVISION

270 PARK AVENUE, NEW YORK, N. Y. 10017

The Term "OXYFUME" is a registered Trade-Mark
of Union Carbide Corporation

FUMIGATION: Kills stored product insects. TO BE USED ONLY BY EXPERIENCED OPERATORS.

FOOD TREATMENT: FDA No. 121.1232 Ethylene Oxide.

Ethylene oxide, either alone or admixed with carbon dioxide or dichlorodifluoromethane, shall be used in amounts not to exceed that required to accomplish the intended technical effects.

Use as a fumigant for the control of microorganisms and insect infestation in ground spices and other processed natural seasoning materials, except mixtures with added salt.

Ethylene Oxide residual limited to 50 ppm.

GENERAL PRECAUTIONS **Fumigation and Sterilization**

1. DO NOT USE OPEN FLAME HEATERS, EXPOSED ELEMENT-ELECTRIC HEATERS OR ANY SPARK PRODUCING ELECTRICAL EQUIPMENT SUCH AS ELECTRIC MOTORS WITH EXPOSED BRUSHES. USE FANS WITH AN INDUCTION TYPE OR SEALED-IN MOTOR.
2. Keep this cylinder away from heat, flame, fires, and spark producing devices.
3. Cylinders should be stored in a well-ventilated area. When discharged from a cylinder in a confined space, OXYFUME 12 replaces the air and may be harmful. Do not breathe vapors.
4. Cylinder valve opens by turning to the left or counter clockwise.
5. Use only metal connections and piping capable of withstanding a working pressure of 125 pounds per square inch. Never use rubber tubing, hose, or gaskets as liquid ethylene oxide attacks rubber.
6. CYLINDERS MUST BE IN UPRIGHT POSITION WHEN DISCHARGING. Cylinders should be secured to prevent toppling during discharge.
7. Cylinder valve outlets are provided with LEFT HAND THREAD. DO NOT ATTACH ORDINARY PIPE FITTINGS TO THESE VALVES AND DO NOT APPLY SHELLAC OR JOINT COMPOUNDS TO VALVE THREADS. Secure from LINDE a Standard Assembly (Part No. 62Y15) for attaching cylinders to vault pipelines and use with plastic tarpaulins, etc.

8. Comply with all insurance requirements, laws, ordinances and regulations pertaining to fumigation and vacuum sterilization.

FOR FUMIGATION ONLY

9. When a vacuum chamber is not available, a 6 mil polyethylene tarpaulin covering the material to be fumigated may be used. If the floor is porous, use a bottom tarp also. "Snakes" 3" to 4" thick made of plastic tubing and filled with sand or water are laid around the covering. This will seal in the gas satisfactorily. Fans with induction type or sealed-in motors should be used to circulate air and fumigant gas within the tarp. A suitable vent should be made for air replacement when introducing the fumigant gas, and when replacing the gas with air in the terminal operation (aeration).
10. See table on back of this tag for fumigation dosages. The fumigant gas is introduced into the fumigant chamber or tarpaulin by means of part No. 62Y15. This consists of a connection to the gas cylinder, 6' of flexible metal tubing, and an adaptor for a spray nozzle. For efficient conversion from liquid to gas, spray nozzle part No. 66Z24 is used.
11. The fumigation table refers to pounds of liquid cylinder contents to be used per 1000 cu. ft. Measurement of pounds used may be made by obtaining an ordinary platform scale and CAREFULLY placing the cylinder on it. When the required weight is used, the cylinder valve is turned off. Be sure the cylinder valve is closed also upon completion of fumigation or removal of the cylinder.
12. Place warning signs on all entrances to rooms where material is being fumigated. Be sure other rooms are well ventilated.
13. Mask equipment. Use self-contained breathing apparatus with stored oxygen or air, or positive pressure mask with inlet in a vapor-free atmosphere when entering a vault, railroad car, or airplane which has free fumigant gas in it.
14. When fumigation is completed, ventilate to open air. Fumigated space should not be entered without mask until odor of OXYFUME 12 fumigant-sterilant is not noticeable. CLOSE CYLINDER VALVE.