



REG. TRADE MARK PART NO. 10301

UNION CARBIDE CORPORATION, Linde Division

NEW YORK, N.Y.

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FOR FUMIGATION USE

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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 micro-organisms and insects in ground spices and other foodstuffs and seasoning materials, except those 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. Cylinders should be stored in a well ventilated place, at least 10' away from any electrical equipment and never use a DE Laval atomizer, as it can catch fire and may be harmful. Do not breathe vapors.**
- 3. CYLINDER VALVE OPENS BY TURNING TO THE LEFT OR COUNTER CLOCKWISE. ALWAYS OPEN THE CYLINDER VALVE WIDE WHEN DISCHARGING CONTENTS. DO NOT RETARD FLOW OF GAS FROM CYLINDER BY THROTTLING CYLINDER VALVE, OR BY USING PRESSURE REGULATORS BECAUSE THE RATIO OF CARBON DIOXIDE TO ETHYLENE OXIDE IN THE GAS MIXTURE WILL BE CHANGED. SEE WARNING ON BACK COVER.**
- 4. USE ONLY METAL CONNECTIONS AND PIPING capable of withstanding a working pressure of 700 pounds per square inch. NEVER USE RUBBER TUBING, HOSE OR GASKETS AS LIQUID ETHYLENE OXIDE ATTACKS RUBBER.**
- 5. Cylinders must be stored in an upright position, never on their side, and must be rotated during discharging in order to avoid static sparks.**
- 6. Cylinder valve outlets are provided with female thread fittings. Do not attach ordinary pipe fittings to these valves and do not attach any type of component to valve threads. See diagram U.S. 2,629,117, a standard assembly part No. 62Y17 for attaching cylinder to vault.**
- 7. COMPLY WITH ALL INSURANCE REQUIREMENTS, LAWS, ORDINANCES, AND REGULATIONS PERTAINING TO FUMIGATION AND VACUUM STERILIZATION.**

FOR FUMIGATION ONLY

- 8. DO NOT ALLOW LIQUID TO STRIKE ANY OBJECT WITHIN 5 FEET OF THE CYLINDER VALVE OR OTHER OUTLET. Discharge of liquid onto objects closer than 5 feet may cause solvent damage or release of a higher proportion of ethylene oxide. This distance may be reduced to 24 inches when a U. S. Nozzle Coupling 152Z48 and Vaporizing Nozzle 66Z24 are used.**
- 9. If dosage required is less than the entire contents of a cylinder, THE PROPER GAS MIXTURE CAN ONLY BE MAINTAINED BY DISCHARGING A MINIMUM OF 12 POUNDS FROM EACH 60 LB. CYLINDER OR 6 POUNDS FROM EACH 30 LB. CYLINDER. When using less than a full cylinder determine the quantity withdrawn by use of a platform scale. SEE WARNING ON BACK COVER.**
- 10. 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.**
- 11. Place cylinders in room, vault, or railroad car, so that even distribution of gas will be obtained throughout space (See paragraph 8). Leave exit door open to act as a vent. Seal all other openings and cracks with gummed tape. OPEN VALVE ON CYLINDERS FARTHEST FROM DOOR FIRST AND WORK TOWARD EXIT. LEAVE SPACE IMMEDIATELY AND SEAL EXIT DOOR.**
- 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 thoroughly. Space should not be entered with a gas mask until clear of CARBON DIOXIDE fumigant sterilant is not noticeable. CLOSE CYLINDER VALVE.**

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