

# ETHYLENE OXIDE

STERILANT-FUMIGANT GAS

ACTIVE INGREDIENT 100% BY WEIGHT

**DANGER! EXTREMELY FLAMMABLE LIQUID AND GAS UNDER PRESSURE MAY FORM EXPLOSIVE MIXTURES WITH AIR HARMFUL IF INHALED CAUSES EYE AND SKIN BURNS**

• **DANGER! CANCER HAZARD AND REPRODUCTIVE HAZARD**

• **OTHER POSSIBLE DELAYED HEALTH EFFECTS** may be irritation of the respiratory tract, coughing, sneezing, and watery eyes.

• **EFFECTS OF OVEREXPOSURE** may be irritation of the eyes, nose, and throat; numbness, weakness, and muscle coordination; dizziness, drowsiness, convulsions; loss of consciousness; irritation of lungs; delayed lung injury; fluid in lungs; breathing difficulties; rashes on skin; allergic skin reaction.

PEL (PPM) TWA (OSHA 29 CFR 1910.1047)

OOOR: Ethylene oxide at high concentrations

Keep away from heat, flame and sparks. Do not breathe vapor. Do not get in eyes, on skin or clothing. Use only in a closed system. Store and use with adequate ventilation. No part of the container may be exposed above 125°F (52°C). Do not use when not in use and when empty, use in accord with tag attached to valve.

**FIRST AID - INHALED:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician. In CASE OF CONTACT, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Aerate, wash or clean contaminated clothing and discard leather goods.

**LEAK:** Evacuate area and keep personnel upwind. Shut off all sources of ignition. Use self contained breathing apparatus and protective clothing, and shut off leak if without risk.

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

**IN EMERGENCY:** Call CHEMTREC 800-424-9300

**BEFORE USING OR HANDLING THIS PRODUCT YOU MUST ALSO READ AND UNDERSTAND LINDE SAFETY PRECAUTIONS BOOKLET FORM L-3499 AND MSDS FORM L-4798.**

FOR INDUSTRIAL USE ONLY NOT FOR USE IN HOSPITALS OR IN HEALTH CARE FACILITIES

DOT/IMO Shipping Name: Ethylene Oxide, UN1040, CAS 75-21-8

EPA Reg. No. 10330-13

EPA Est. No. 10330

BATCH

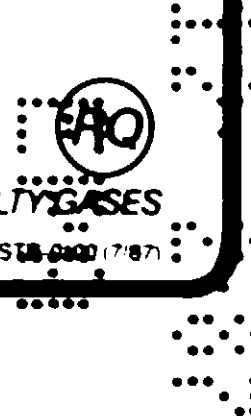
Union Carbide Corporation  
Linde Division, Danbury, CT 06817

MADE IN USA

DO NOT REWIND TO OTHER

**LINDE SPECIALTY GASES**

STB-0000 (7/87)



RQ

# ETHYLENE OXIDE

STERILANT - FUMIGANT GAS  
UN1040  
CAS 75-21-8  
ACTIVE INGREDIENT 100% BY WEIGHT  
NET CONTENTS 4 LBS. (1.8KG)

EVUCTION  
TUBE

WALBRIDGE SPECIALTY GASES

RQ

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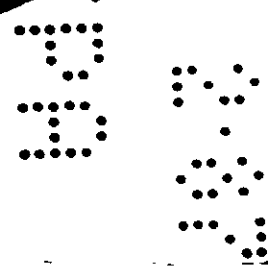
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EVUCTION  
TUBE

WALBRIDGE SPECIALTY GASES



NOT RECOMMENDED  
In Accordance with...  
Based on...

DO NOT REMOVE THIS TAG

L-14-120

### ETHYLENE OXIDE STERILANT-FUMIGANT GAS

ACTIVE INGREDIENT—ETHYLENE OXIDE 100% BY WEIGHT  
DANGER—EXTREMELY FLAMMABLE

#### DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

It is to be used only by persons experienced in Ethylene Oxide sterilization and fumigation, or by persons under direct supervision of persons who are experienced in Ethylene Oxide sterilization and fumigation. Use only in accordance with directions given on this tag and the safety precautions listed on the body label. See current Union Carbide Corporation, Linde Division, Material Safety Data Sheet Form L-4788 and safe practices booklet L-3488 for additional safety information.

#### GENERAL INSTRUCTIONS

1. This container is equipped with an eductor tube and is designed to discharge liquid.
2. This container has been pressurized with nitrogen to a pressure of 50 psig (345 kPa) at 70°F (21.1°C). Pressure will be higher if temperature is above 70°F (21.1°C); lower if temperature is below 70°F (21.1°C). Contact supplier if, upon receipt, container pressure is below 50 psig (345 kPa) at 70°F (21.1°C).
3. Container must be in upright position when discharging. Container must be secured to prevent falling over.
4. Discharge valve outlet is provided with a CGA 510 connection which has left-hand threads.
5. BCG-style regulators and DOT-SP drums are also provided with a CGA 580 pressurization valve which has right-hand threads. Do not discharge product from the CGA 580 pressurization valve.
6. Remove protective valve plugs and make sure valve threads are undamaged. Do not attach an ordinary pipe fitting to these valves.
7. Use steel fittings and piping or 316 stainless steel tubing. Do not use rubber, plastics, or copper materials. Ground all equipment, including cylinders, to avoid static sparks.
8. Install check valves in the discharge line from this container to prevent back-flow into container.
9. Connect the CGA 580 pressurization valve to a source of nitrogen using a line equipped with a pressure regulator and check valve. Nitrogen pressure must not exceed 50 psig (345 kPa). Never use compressed air or other gases to pressurize the cylinder or drum.
10. Open both valves by turning handwheel counterclockwise. Use standard "T" wrenches (Linde PN SGB214 and SGB216) to open and close cylinder valves. Never use an ordinary wrench or other leverage device to open or close cylinder valves.
11. Replace valve plugs tightly in valve outlets before returning container to supplier.

(Continued on body)

#### STORAGE AND DISPOSAL

Store according to instructions provided on label and this tag. Return cylinder to supplier.

#### STERILIZATION

1. Use Ethylene Oxide only in sterilizers designed for use with Ethylene Oxide.
2. Use Ethylene Oxide in accordance with directions supplied by the sterilizer manufacturer.
3. Sterilizer temperature and pressure influence both exposure time and Ethylene Oxide concentration. The variation of type and quantity of material to be sterilized, how packed, size of sterilizer, types of baskets to be filled, and chamber relative humidity also affect the exposure time required for sterilization. Gas sterilizer cycle parameters should be those furnished by the sterilizer manufacturer, if applicable. If other cycle parameters are used, the efficacy of the alternate cycle must be validated and is the responsibility of the user.
4. Aerate sterilized materials before use.

#### FUMIGATION

1. Fumigation with Ethylene Oxide must be performed only in vacuum or gas-tight chambers designed for use with Ethylene Oxide.
2. Aerate fumigated materials before use.

#### FOOD TREATMENT: 21 CFR 185.289

"Ethylene Oxide may be safely used as a fumigant for the control of microorganisms and insect infestation in ground spices or other processed natural seasoning materials, except nutmeats to which salt has been added. . . ."

"Ethylene Oxide, either alone or combined with carbon dioxide or chloroform, when used in amounts not to exceed that required to accomplish the intended technical effect."

UNION CARBIDE SPECIALTY GASES

Union Carbide Corporation  
Linde Division  
Danbury, Connecticut 06817

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