STERILANT-FUMIGANT GAS.
ACTIVE INGREDIENT: ETHYLENE OXIDE (CAS 75-21-8) 100.0%
KEEP OUT OF REACH OF CHILDREN
DANGER PELIGRO
PRECAUCION AL USUARIO: Si usted no lee Ingles, no use este producto hasta que la etiqueta la haya sido explicada ampliamente. Users must follow the requirements of the OSHA occupational exposure standard for ethylene oxide (29 CFR 1910.1047).

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS.
DANGERS EXTREMELY FLAMMABLE LIQUID AND GAS UNDER PRESSURE. MAY CAUSE EXPLOSION MIXTURES WITH AIR. CAUSES EYE AND SKIN BURNS. IF INHALED, MAY CAUSE RESPIRATORY AND NERVOUS SYSTEM DAMAGE.

EFFECTS OF OVEREXPOSURE.
May be fatal if inhalaed in high concentrations. May cause irritation of respiratory tract, chest tightness, headache, nausea, vomiting, diarrhea, lightheaded feeling, dizziness, weakness, drowsiness, cyanosis, loss of coordination, convulsions, coma, delayed lung injury (fuel in lung), immediate or delayed skin irritations, and irritation of skin and eyes, allergic skin reaction.

OTHER POSSIBLE DELAYED HEALTH EFFECTS.
May cause nervous system injury, cataracts, adverse reproductive effects, chromosomal and mutagenic changes, and cancer.

REPL: 1999 PMA Ethylene Oxide (OSHA-29CFR1910.1047)
EL: SPM-exposure limit, 15 minutes.
DO NOT: Ethylene oxide and exposure to toxic levels may occur without warning or detection by the user.

PRECAUTIONS:
Do not breathe vapor. Do not swallow. Do not get in eyes, on skin, on clothing. Store and use with adequate ventilation in accordance with 29 CFR 1910.147.

PHYSICAL AND CHEMICAL HAZARDS
Ethylene oxide is extremely flammable and reactive. Contents under pressure. Keep away from heat, flames, sparks, or hot surfaces. Do not allow sources of ignition near the sterilization/fumigation area. Use only in closed system. No part of the container may be exposed above 120°F (50°C). Close valve when not in use and when empty.

Use in accordance with tag attached to valve. Ground all equipment, including containers, to avoid static sparks.

LEAK: Evacuate area and keep personnel upwind. 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 cut off immediately. Move container away from fire if without risk. Use water spray or fog nozzle to keep container cool.

Personal Protective Equipment
Some materials that are chemically resistant to this product are butyl rubber.

All handlers must wear a minimum of:
- Long-sleeved shirt and long pants,
- Shoes plus socks,
- Chemical-resistant gloves,
- and The employer shall provide a respirator that is adequate to protect the health of the employee and ensure compliance with all other OSHA statutory and regulatory requirements (including 29CFR 1910.1047 and 29CFR 1910.134), under routine and reasonably foreseeable emergency situations. When handlers could have eye or skin contact with ethylene oxide or ethylene oxide solutions such as during maintenance and repair, vessel cleaning, or cleaning up spills, they must wear:
- Chemical-resistant apron, such as a poncho, protective suit, or hodowear that protects the area of the body that might contact ethylene oxide or ethylene oxide solutions, and
- Face-sealing goggles, a full-face shield, or a full-face respirator.

General Knowledge
1. Respirator users must be fit-tested and fit-checked using a program that conforms to OSHA's requirements (including 29CFR Part 1910.134).
2. Respirator users must be trained using a program that conforms to OSHA's requirements (including 29CFR Part 1910.134). 3. Respirator users must be examined by a qualified medical practitioner to ensure physical ability to safely wear the style of respirator to be worn. A qualified medical practitioner is a physician or other licensed health care professional (PLHCP) who will evaluate the ability of a worker to wear a respirator. The initial evaluation consists of a questionnaire that asks about medical conditions (such as a heart condition) that would be problematic for respirator use. If concerns are identified, then additional evaluations, such as a physical exam, might be necessary. The initial evaluation must be done before respirator use begins. It does not need to be repeated unless the health status or respirator use conditions change (see 29CFR Part 1910.134). Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, 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.

Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

WARNING:
Caution should be used when handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS
Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollution Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

FIRST AID
IN ALL CASES OF OVEREXPOSURE, GET MEDICAL ATTENTION IMMEDIATELY.

1. If swallowed, call the Poison Control Center or doctor for treatment advice.

DOSAGE: Do not induce vomiting. Do not give anything by mouth to an unconscious person.

NOTE TO PHYSICIAN: REFER TO SECTION IV, FIRST AID MEASURES OF THE MSDS FOR EACH INGREDIENT. TO OBTAIN MSDS, call 1-800-522-8001. Skin exposure to Ethylene Oxide will commonly result in skin irritation with extensive blister formation. At high concentrations severe conjunctivitis can occur. Irritation of the respiratory tract may occur, but without acute lung edema. Symptoms of systemic intoxication are headache, nausea, vomiting, incoordination, and cardiac irregularities. Treatment is symptomatic.

IN CASE OF EMERGENCY CALL: 1-800-498-5701. Have a copy of the label or the MSDS when calling a poison control center or doctor or going for treatment.

PRECAUTIONARY STATEMENTS

Hazard Class: 2.3 (2, 1)
ID Number: UN1040
INHALATION HAZARD
EPA Registration No.
EP A Registration No.
ID Number: UN1040
INHALATION HAZARD
Honeywell
101 Columbia Rd., Morristown, NJ 07962-1053

Before using or handling this product you must also read and understand the Honeywell Material Safety Data Sheet for this product, for industrial use only. Not for use in hospitals or health care facilities.

DOT/IMO Shipping Name: Ethylene Oxide

Honeywell
101 Columbia Rd., Morristown, NJ 07962-1053

Made in USA

Do not use this label.

STB-0100 (11-14-2008)
A. Ethylene oxide must be used only in facilities that meet the requirements of 29 CFR 1910.1047 in non-portable (commercial) vacuum or gas-tight chambers designed for use with ethylene oxide. After February 28, 2010, a single chamber process is required in sterilization facilities, including facilities treating medical equipment and supplies, musical instruments, library/museum artifacts, cosmetics, and spices, the following requirements must be followed: Sterilization/fumigation with ethylene oxide must be performed only in vacuum or gas-tight chambers designed for use with ethylene oxide. Safety and awareness training is required for all employees including office staff. Air monitoring should include the entire facility including office space, break rooms, and other non-production areas.

NOTE: It is a violation of Federal Law to use ethylene oxide sterilant/fumigant gas for the fumigation of beehives, airplanes, trains, buses, and other vehicles or workplaces. This information should be considered general, and not as a replacement for detailed information issued by manufacturers.

B. Ethylene oxide cycle parameters depend on several sterilizing/fumigating variables: preconditioning (if any); exposure time; chamber size; ethylene oxide gas concentration; air concentration; ethylene oxide concentration; chamber temperature; humidity level; types and quantities of items to be sterilized/fumigated; air temperature; and such that explosive atmospheres are never present in the chamber. The following are recommended parameters for the sterilization of medical and laboratory items:

- Place spices in the treatment chamber. Assure that the mixture of ethylene oxide and air is compatible with the chamber design, then, introduce into the chamber a concentration of ethylene oxide not to exceed 500 mg/L, with a dwell time not to exceed 16 hours. Then evacuate the gas from the chamber using a sequence of not less than 16 steam washes (injections and evacuations) between 1.0 to 2.0 PSIA (28"Hg) and 2.0 PSIA (28"Hg) while maintaining a minimum chamber temperature of 115° F.

- Never use parameters which allow flammable mixtures of ethylene oxide and air to enter the chamber.

- Employers in facilities that use ethylene oxide must comply with all of the requirements for ethylene oxide use specified in 29 CFR 1910.1047.

C. The following is a list of ranges for the critical variables which must be in proper relationship for ethylene oxide to be an effective sterilizing/fumigating agent. This information should be considered general, and not as a complete list of all parameters that need to be considered.

D. Cycle parameters are process and operator dependent. This information should be considered general, and not as a replacement for detailed information issued by manufacturers.

E. Employers in facilities that use ethylene oxide must comply with all of the requirements for ethylene oxide use specified in 29 CFR 1910.1047.
GENERAL INSTRUCTIONS

1. Always check container valves and relief valves for leaks before moving cylinder into your facility.
2. This container is equipped with an eductor tube for liquid delivery. If ethylene oxide gas is required, use vaporizing equipment.
3. This container has been pressurized with nitrogen to a pressure of 50 psig (3.52 kg/cm²) at 70°F (21.1°C). Vapor 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 (3.52 kg/cm²).
4. Container must be in an upright position when discharging. Cylinders must be secured to prevent falling over.
5. Liquid withdrawal valve (marked “Liquid”) is provided with a CGA 510 connection which has left-hand threads.
6. EOX and SS.55 style cylinders and DOT 5P drums are also provided with a CGA 580 inert pressurizing valve (marked “Vent”) which has right-hand threads. Do not discharge product from the CGA 580 inert pressurizing valve.
7. Remove protective valve plugs and make sure valve threads are undamaged. Do not attach an ordinary pipe fitting to these valves. The connections to the container valves should be brass CGA 510 and CGA 580 connectors. Use of other metals could cause damage to the brass container valves.
8. All other piping and fittings should be stainless steel pipes and fittings capable of withstanding the pressure to be encountered. Do not use rubber, plastic, or copper materials. Install relief devices where liquid can be trapped between valves.
9. Ground all equipment, including containers, to avoid static sparks.
10. Use only spark-proof tools.
11. Use only explosion-proof electrical equipment where ethylene oxide may be present.
12. Install check valves in the discharge lines from this container to prevent backflow into the container.
13. Do not discharge or exhaust air from the container into any atmosphere or other equipment. EOX and SS.55 cylinders and 5P drums should be used only for ethylene oxide sterilization gas.
14. Exterior container valves can be blocked with堵hole plugs. Do not use a wrench or other leverage device on valve threads. Use a T wrench to open the inert pressurizing valve on the EOX and SS.55 cylinders and 5P drums.
15. Use with adequate general and local ventilation. Vapors form from this product and may travel or be moved by air currents and ignited by pilot lights, other flames, sparks, heaters, electrical equipment, static discharges or other ignition sources at location distant from product handling point.
16. Determine the quantity of product withdrawn from the container by using an appropriate scale.

STORAGE AND DISPOSAL

Do not contaminate food, feed, or water by storage and disposal.

PESTICIDE STORAGE

Store according to instructions provided on label and this tag. Store away from heat in an area with adequate ventilation. Do not store in direct sunlight. To minimize polymer growth, ethylene oxide must be stored in a place where the temperature consistently exceeds 70°F. To control ethylene oxide polymer growth, see all dead-end gas on a brake, for fire protection.

PESTICIDE DISPOSAL

Do not dispose of in landfills. Disposal of hazardous waste is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Honeywell Field representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL

Refillable container. Refill this container with ethylene oxide only. Do not reuse this container for any other purpose. Do not mix this container with other products. Do not move this container to a disposal site. Do not expose this container to mixed waste. Do not return this container to supplier.