

*VALLEYCARE*  
**OLIVE VIEW-UCLA MEDICAL CENTER/HEALTH CENTERS**  
**DEPARTMENT: FACILITIES**  
**POLICY & PROCEDURE**

**NUMBER: 728**  
**VERSION: 1**

**SUBJECT/TITLE:** ETHYLENE OXIDE

**POLICY:**

**PURPOSE:**

**PROCEDURE:** SPECIAL SAFETY PROCEDURES IN THE HANDLING OF E.T.O. GAS

Ethylene oxide (EO) is a toxic substance and a suspected cancer and reproductive hazard. Avoid breathing airborne concentrations of E.O.

1. E.O. must be used, handled, and stored in well-ventilated areas not exceeding 80° F (27°C).
2. The work place should be monitored for excessive airborne concentrations of E.O.
3. If an E.O. leak occurs in the system:
  - a. Avoid breathing the fumes
  - b. Vacate the area immediately, and
  - c. Report the occurrence to the authority (Safety Officer at ext. 3405.)

Do not return to the area until trained personnel have located and corrected the problem.

4. Check with your supervisor to determine what protective clothing or equipment is required for your work place.
5. E.O. cylinders should be stored and used in the upright position; and be securely fastened to permanent structures.
6. E.O. cylinders must not be changed without wearing appropriate protective equipment.
7. Use freon for checkout of E.O. equipment and determining possible leaks in an E.O. system.

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PLEASE NOTE: That the sterilant used in our equipment is a 12/88 mixture of ethylene oxide (12% by weight) and dichlorodifluoromethane (88% by weight).

### E.O. EMERGENCY PROCEDURES

1. In case of E.O. leak or other E.O. emergency follow these procedures:
  - a. Leave or evacuate the area.
  - b. Extinguish all open flames.
  - c. Close all doors.
  - d. Notify designated safety personnel.
  - e. Do not re-enter sterilizer room until E.O. levels have been reduced to a safe level.
2. Know where emergency procedures are posted. Become familiar with them.
3. In the event of building exhaust shutdowns, all E.O. sterilizers should be shut down.

### EMERGENCY CARE

1. If liquid E.O. comes in contact with the skin, immediately remove any contaminated clothing shoes. Thoroughly wash contaminated skin. Do not wear clothing again until it has been laundered and/or aerated.

Discard all leather items.

2. If liquid E.O. comes in contact with the eyes, immediately flush them with large amounts of water. Call a physician.
3. If E.O. vapor is inhaled, immediately seek fresh air.
4. If nausea and vomiting develop, keep person quiet and warm and call a physician.
5. If breathing is difficult, give oxygen and call a physician.
6. If breathing has stopped, perform cardiopulmonary resuscitation (CPR) and call a physician.

### EMERGENCY ACTION

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When notified of a leak or spill, the trained emergency team will take these measures:

1. Ventilate the area by increasing local exhaust, in order to decrease E.O. concentrations by dilution with air by opening louvers or dampers.
2. If the area must be entered before high E.O. concentrations are reduced, the protective clothing and equipment must be used.
  - a. E.O. – impermeable clothing, providing complete body coverage to prevent skin contact with liquid E.O. or E.O. – containing solutions.
  - b. Splash proof safety goggles or face shield.
  - c. Work shoes impermeable to E.O. Leather shoes should be avoided.
  - d. Butyl rubber work gloves.
  - e. An air-supplied positive-pressure full face piece respirator with a joint label of approval from the Mine Safety & Health Administration (MSHA) and National Institute for Occupational Safety & Health (NIOSH) for the use with Ethylene Oxide (EO).
3. Any symptoms of acute exposure to E.O. should be treated according to accepted medical procedures.

**DEPARTMENTS: FACILITIES**

**DEFINITIONS:**

References:	
Approved by: Robert Ross (Director, Facilities)	Date: 08/12/2009
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