



ETHYLENE OXIDE

What is Ethylene Oxide?

Ethylene oxide (also known as EO) processing is widely used for the sterilization of healthcare devices and instruments. The process involves exposing products to ethylene oxide gas under vacuum in a sealed chamber.

Ethylene oxide sterilization is a chemical process consisting of four primary process variables: gas concentration, humidity, temperature and time. EO is an alkylating agent that disrupts cellular constituents of microorganisms, including DNA and proteins, which prevents them from reproducing. The EO penetrates the breathable packaging and sterilizes all accessible surfaces, achieving required sterility assurance levels of 10^{-6} .

What is Ethylene Oxide Used For?

Ethylene oxide can penetrate multiple layers of breathable packaging, making it suitable for the sterilization of a wide range of materials not compatible with other methods of sterilization. Examples of medical devices sterilized with EO include:

- Assembled complex devices
- Catheters
- Custom procedure packs
- Equipment with integrated-electronics
- Multi-lumen tubing products
- Cardiovascular stents
- Wound care dressings
- Combination devices

(Ethylene Oxide Chambers)



(Inside an EO Chamber)



FOR MORE INFORMATION

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