



# Products for Low Temperature Sterilization

Items that cannot be sterilized in steam sterilizers—such as flexible endoscopes—must be sterilized with other methods. Ethylene oxide and vaporized hydrogen peroxide are the most commonly used sterilants for achieving terminal sterilization for these heat- and moisture-sensitive instruments.

3M has a wide range of products for monitoring the results of every step of the low temperature sterilization process, from exposure monitoring to record keeping. And, 3M offers 3M™ Steri-Vac™ Sterilizer/Aerators that use 100% ethylene oxide (EO), the “gold standard” for low temperature sterilization for over 50 years. In fact, over half of all heat- or moisture-sensitive devices (including sterile single-use devices made by manufacturers) are sterilized with ethylene oxide.<sup>1</sup>

Steri-Vac Sterilizers can help meet the challenges of modern sterile processing departments and provide excellent value through high efficacy, excellent materials compatibility, low cost-in-use, and a sterilant with an advanced ability to penetrate tight spaces and complex instrument configurations.

### Best Practices

- Refer to ANSI/AAMI ST58: Chemical sterilization and high level disinfection in health care facilities.
- Refer to ANSI/AAMI ST41: Ethylene oxide sterilization in health care facilities: Safety and effectiveness.
- Refer to ISO 111351-1: Sterilization of health care products – Ethylene oxide – Requirements for the development, validation and routine control of a sterilization process for medical devices.
- Consider the value of critical instrumentation, instrument repair intervals when using different sterilization methods, and demonstrated use frequency to help determine the optimal combination of low and high temperature sterilizing technologies for your health care facility's overall equipment strategy.
- Always consult the medical device manufacturer for their written reprocessing guidelines, including recommended sterilization compatibility and parameters.

<sup>1</sup>Global Industry Analysts, Inc. Sterilization Equipment and Supplies – A Global Strategic Business Report MCP-3362 Oct. 2011.

# Ethylene Oxide Sterilization – Rapid Readout Monitoring

## ETHYLENE OXIDE - 4-hour

### 3M™ Attest™ Rapid Readout Biological Test Packs for Ethylene Oxide (EO) Sterilization

Each test pack contains a 3M™ Attest™ Rapid Readout Biological Indicator 1294 for Ethylene Oxide.

- Results in 4 hours
- This convenient disposable pack is designed to be as resistant as the routine EO biological indicator test pack recommended by AAMI



Cat. No.	Description	Packaging	Shipping
1298*	EO Test Pack (25 controls/box)	25 packs/box	2 boxes/case
1298F*	EO Test Pack (5 controls/box)	25 packs/box	2 boxes/case

\*Must be used in conjunction with 3M™ Attest™ Auto-reader 390G or Auto-reader 290G.

## ETHYLENE OXIDE - 4-hour

### 3M™ Attest™ Rapid Readout Biological Indicator for Ethylene Oxide (EO) Sterilization

- Results in 4 hours



Cat. No.	Description	Packaging	Shipping
1294*	EO Biological Indicator (Green cap)	50 each/box	4 boxes/case

\*Must be used in conjunction with 3M™ Attest™ Auto-reader 390G or Auto-reader 290G.

## ETHYLENE OXIDE - 4-hour

### 3M™ Attest™ Auto-reader 390G for Ethylene Oxide (EO) Sterilization

- For use with 3M™ Attest™ Rapid Readout Biological Indicator 1294 for Ethylene Oxide
- Backlit LCD panel for fast, easy reading of data, including at-a-glance minutes remaining in incubation
- Easy custom configuration buttons on top of the unit
- Remote viewing of BI results from your Smart Phone or PC
- Option to save and/or print incubation records from Web App
- Ability to connect to select instrument-tracking software systems



Cat. No.	Description	Packaging	Shipping
390G	Auto-reader for use with 3M™ Attest™ Rapid Readout Biological Indicator 1294 for EO, 37°C (98.6°F)	1 unit/box	1 box/case

# Ethylene Oxide Sterilization – Standard Readout Monitoring

## ETHYLENE OXIDE - 48-hour

### 3M™ Attest™ Biological Indicator Test Packs for Ethylene Oxide (EO) Sterilization

Each test pack contains a 3M™ Attest™ Biological Indicator 1264.

- Biological indicator vials are easy to use and interpret with visual color readout in 48 hours
- This convenient disposable challenge pack presents a challenge to the sterilization process equivalent to the user-assembled BI challenge pack (towel PCD) recommended to AAMI

\*As defined by ANSI/AAMI/ISO 11140-1:2005/ (R)2010



Cat. No.	Description	Packaging	Shipping
1278**	EO Test Pack (25 controls/box)	25 packs/box	2 boxes/case
1278F**	EO Test Pack (5 controls/box)	25 packs/box	2 boxes/case

\*\*Must be used in conjunction with 3M™ Attest™ Biological Indicator Incubator 117, 127 or 130.

## ETHYLENE OXIDE - 48-hour

### 3M™ Attest™ Biological Indicators for Ethylene Oxide (EO) Sterilization

- Biological indicator vials are easy to use and interpret with visual color readout in 48 hours



Cat. No.	Description	Packaging	Shipping
1264**	EO Biological Indicator (Green cap)	100 each/box	4 boxes/case
1264P**	EO Biological Indicator (Green cap)	25 each/box	4 boxes/case

\*\*Must be used in conjunction with 3M™ Attest™ Biological Indicator Incubator 117, 127 or 130.

## ETHYLENE OXIDE

### 3M™ Attest™ Biological Indicator Incubators for Ethylene Oxide (EO) Sterilization

Provide optimal conditions for accurate readout of 3M™ Attest™ Biological Indicators.

- Convenient, 14- or 28-vial capacity
- Dry-block design pre-set to proper incubation temperature



Cat. No.	Description	Packaging	Shipping
117	14-vial (round), 37°C (EO), for use with EO Biological Indicator 1264	1 each/box	1 box/case
127	28-vial (2-tier), 37°C (EO), for use with EO Biological Indicator 1264	1 each/box	1 box/case
130	28-vial (2-tier), 37°C/56°C (EO/Steam), for use with Steam Biological Indicator 1261 or 1262 or EO Biological Indicator 1264	1 each/box	1 box/case

# Products for Low Temperature Sterilization

## ETHYLENE OXIDE

### 3M™ Comply™ Ethylene Oxide (EO) Chemical Indicator Strip

Long strip of chemical indicator ink printed on perforated-style strip.

- Allows full- or half-length use for different pack sizes
- For use in 100% EO sterilization systems
- Indicator changes from red to green when exposed to ethylene oxide sterilization conditions



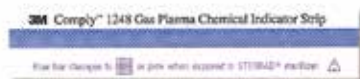
Cat. No.	Description	Packaging	Shipping
1251	EO Chemical Indicator Strip, 1,5 cm x 20 cm (5/8" x 8")	240 each/box	1 box/case

## VAPORIZED HYDROGEN PEROXIDE

### 3M™ Comply™ Gas Plasma Chemical Indicator Strip

Internal pack chemical indicator for use in STERRAD® sterilization processes (Models 50, 100S and 100).

- Indicator turns from blue to pink when exposed to a vaporized hydrogen peroxide sterilization process
- Indicator color does not fade when exposed to light



Cat. No.	Description	Packaging	Shipping
1248	2 cm x 10 cm (13/16" x 4")	250 each/box	4 boxes/case

## ETHYLENE OXIDE

### 3M™ Comply™ Indicator Tapes for Ethylene Oxide (EO) Sterilization (AAMI Class 1)<sup>†</sup>

External indicator tape for use in ethylene oxide sterilization processes.

- Provides immediate identification of processed items and seals packs
- Chemical indicator lines turn from yellow to red when exposed to an EO sterilization process

<sup>†</sup>As defined by ANSI/AAMI/ISO 11140-1:2005/ (R)2010



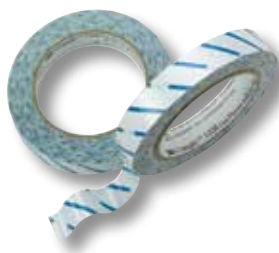
Cat. No.	Description	Packaging	Shipping
1224-0	1,25 cm x 55 m (1/2" x 60 yds.), Green	—	36 rolls/case
1224-1	2,5 cm x 55 m (1" x 60 yds.), Green	—	18 rolls/case
1224-6	1,9 cm x 55 m (3/4" x 60 yds.), Green	—	24 rolls/case

## VAPORIZED HYDROGEN PEROXIDE

### 3M™ Comply™ Gas Plasma Indicator Tape

External indicator tape for use in STERRAD® sterilization processes (Models 50, 100S and 100).

- Provides immediate identification of processed items and seals packs
- Chemical indicator lines turn from blue to pink when exposed to a vaporized hydrogen peroxide sterilization process



Cat. No.	Description	Packaging	Shipping
1228	1,9 cm x 55 m (3/4" x 60 yds.), White	—	24 rolls/case

ACCESSORIES

3M™ Tape Dispensers

The 3M™ Comply™ Indicator Tape Dispenser M52 with tabber has a weighted base and can accommodate three rolls of 1/2-inch (1,25 cm), up to two rolls no wider than 1-inch (2,5 cm), or one 2-inch (5 cm) roll of indicator tape. A tabber can be attached to the tape dispenser, which automatically folds a 1/4-inch (0,64 cm) length of tape up to a 1-inch (2,5 cm) roll width.

The Heavy Duty Tape Dispenser C22 is made of rugged, high impact, durable plastic and can hold two rolls of 1-inch (2,5 cm) wide indicator tape.



Cat. No.	Description	Packaging	Shipping
M52	Heavy Duty Tape Dispenser	—	1 each/case
C22	Heavy Duty Tape Dispenser	—	2 each/case

ETHYLENE OXIDE

3M™ Steri-Gas™ EO Gas Cartridges

Easy-to-use, single-dose cartridges are engineered for safety.

- Precise usage of EO with single-dose cartridges means no waste of sterilant
- No CFCs or HCFCs (100% EO)
- For use with 3M™ Steri-Vac™ Sterilizers



Cat. No.	Description	Packaging	Shipping
4-100	100 gram (3.5 oz.) Cartridge for Models 400C, 4XL and 5XL	12 each/box	4 boxes/case
8-170	170 gram (6 oz.) Cartridge for Model 8XL	12 each/box	4 boxes/case

ETHYLENE OXIDE

3M™ Steri-Vac™ Printer Papers

Designed to work with 3M™ Steri-Vac™ Models 4XL, 5XL and 8XL Sterilization Systems.



Cat. No.	Description	Packaging	Shipping
1216A	Printer Paper, 60 mm (2-3/8") wide for 4XL and 5XL (with serial number below 720000)	—	2 rolls/case
1217	Printer Paper, 79 mm (3-1/8") wide for 8XL and 5XL (with serial number above 720000)	—	2 rolls/case

# Products for Low Temperature Sterilization

## ETHYLENE OXIDE

### 3M™ Steri-Lok™ Peel Open Packages for Ethylene Oxide (EO) Sterilization

Provides a breathable barrier that allows sterilant to permeate, while preventing microbial penetration during handling and storage after sterilization.



Cat. No.	Description	Packaging	Shipping
8502	7,9 cm x 24,8 cm (3-7/8" x 9-3/4")	250 each/box	4 boxes/case
8504	7,9 cm x 61 cm (3-1/8" x 24")	250 each/box	4 boxes/case
8505	17,8 cm x 33 cm (7" x 13")	250 each/box	4 boxes/case
8506	29,8 cm x 38 cm (11-3/4" x 14-7/8")	250 each/box	4 boxes/case
8507	40 cm x 45,7 cm (15-3/4" x 18")	250 each/box	4 boxes/case

## STEAM AND ETHYLENE OXIDE

### 3M™ Comply™ Instrument Protectors

Protect sharp-pointed surgical instruments from damage and reduce possibility of pouch puncture during sterilization and handling.

- Indicators on the protectors verify steam or EO gas processing
- For use inside single peel pouches



Cat. No.	Description	Packaging	Shipping
13911	5,1 cm x 12,8 cm (2" x 5")	100/pack	10 packs/case
13913	9,9 cm x 16,8 cm (3-1/2" x 6-5/8")	100/pack	10 packs/case
13915	14 cm x 24 cm (5-1/2" x 9-1/2")	100/pack	10 packs/case

## ETHYLENE OXIDE

### 3M™ Ethylene Oxide (EO) Monitoring Badge (with prepaid analysis)

Lightweight monitoring badges designed for sampling personnel or work areas. Uses proven scientific principle of diffusion.

- Clips to lapel or pocket near breathing zone for passive monitoring of individual during a work shift
- Meets OSHA accuracy requirements for 8-hour TWA and 15-minute STEL sampling of ethylene oxide
- Badge is mailed for prepaid analysis and a report is provided to the sender

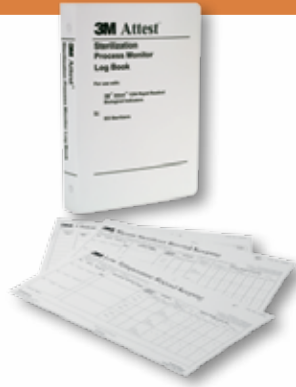


Cat. No.	Description	Packaging	Shipping
3550	EO Monitoring Badge	—	5 each/case

**STEAM, ETHYLENE OXIDE,  
OTHER LOW TEMPERATURE METHODS  
AND GLUTARALDEHYDE MONITORS**

**3M™ Attest™ Log Books**

Preprinted log books put monitoring information at your fingertips.



Cat. No.	Description	Packaging	Shipping
1267-A	Log Book for EO with 50 Record Charts, Green, use with 3M™ Attest™ Rapid Readout Biological Indicators 1294	1 each/pack	1 pack/case
1268	Log Book with 50 Record Charts, use with all Low Temperature BI and CI products	1 each/pack	1 pack/case

**STEAM AND ETHYLENE OXIDE**

**3M™ Comply™ Load Record Cards**

Provide a permanent record of sterilizer use and work flow.



Cat. No.	Description	Packaging	Shipping
1253	EO Load Record Card, 7,6 cm x 12,8 cm (3" x 5")	240 each/box	2 boxes/case
67200	Steam and EO Load Record Card, 7,6 cm x 12,8 cm (3" x 5")	250 each/box	4 boxes/case
67201	Steam and EO Load Record Card, 10,2 cm x 14 cm (4" x 5-1/2")	250 each/box	4 boxes/case

**STEAM, ETHYLENE OXIDE AND  
OTHER LOW TEMPERATURE METHODS**

**3M™ Envelopes, Sheets and Binders**

Build a flexible record keeping system based on the needs of your department.



Cat. No.	Description	Packaging	Shipping
1254E-A	Sterilization Record Envelopes with two "Load-Contents" columns for Steam, IUSS or Low Temperature Systems, 24,13 cm x 29,21 cm (9-1/2" x 11-1/2")	100 each/pack	5 packs/case
1254S-A	Sterilization Record Sheets with two "Load-Contents" columns for Steam, IUSS or Low Temperature Systems, 21,59 cm x 27,94 cm (8-1/2" x 11")	250 each/pack	4 packs/case
1254E-LT	Low Temperature Sterilization Record Envelopes with one "Load-Contents" column format, 24,13 cm x 29,21 cm (9-1/2" x 11-1/2")	100 each/pack	5 packs/case
1254-A	Sterilization Record System, binder with 50 each 1254E-A envelopes and 50 each 1254S-A sheets	1 each	1 each/case
1254B	Sterilization Record Binder (order 1254E series envelopes and 1254S-A sheets separately)	1 each	1 each/case



# Products for Low Temperature Sterilization

## HARDWARE

### 3M™ Steri-Vac™ Sterilizer/Aerator 8XL

100% ethylene oxide (EO) gas sterilizer/aerator with two pre-programmed cycles:

Warm Cycle (55°C) and Cool Cycle (37°C).

- 7.9 cu. ft. chamber
- Physical cycle parameters are shown on display with print capability
- Designed for safety, single-dose 100% EO cartridge is punctured inside the chamber only when proper negative pressure conditions are achieved
- Built-in aeration cycle allows a single chamber process



Cat. No.	Description	Shipping
8XL	Available in single- or double-door, pass-through design Exterior: 179 cm (H) x 94 cm (W) x 109 cm (D) [70" (H) x 37" (W) x 43" (D)] Chamber: 46 cm (H) x 51 cm (W) x 97 cm (D) [18-1/8" (H) x 20" (W) x 38" (D)]	1 unit/case

## HARDWARE

### 3M™ Steri-Vac™ Sterilizer/Aerator 5XL

100% ethylene oxide (EO) gas sterilizer/aerator with two pre-programmed cycles:

Warm Cycle (55°C) and Cool Cycle (37°C).

- 4.8 cu. ft. chamber
- Physical cycle parameters are shown on display with print capability
- Designed for safety, single-dose 100% EO cartridge is punctured inside the chamber only when proper negative pressure conditions are achieved
- Built-in aeration cycle allows a single chamber process



Cat. No.	Description	Shipping
5XL	Available in single- or double-door, pass-through design Exterior: 59 cm (H) x 76 cm (W) x 90 cm (D) [23" (H) x 30" (W) x 35" (D)] Chamber: 38 cm (H) x 43 cm (W) x 83 cm (D) [15" (H) x 17" (W) x 34" (D)]	1 unit/case

## HARDWARE

### 3M™ Ethylene Oxide (EO) Abator

Abator removes EO gas exhausted from 3M™ Steri-Vac™ Sterilizers/Aerators, converting it into CO<sub>2</sub> and water vapor.

- Removal efficiency is 99.9%+ at normal operating temperatures and concentrations (EO concentrations greater than 100 ppm)
- The unit comes complete, ready for installation and connection to the building utility service lines and sterilizer exhaust, then works automatically with sterilization system
- Each EO Abator can be used with up to two 3M™ Steri-Vac Sterilizer/Aerators Model 5XL or 8XL



Cat. No.	Description	Shipping
50	81 cm (H) x 92 cm (W) x 107 cm (L) 32" (H) x 36" (W) x 42" (L)	1 unit/case



#### 3M Health Care Infection Prevention Division

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3M Infection Prevention Solutions