



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (1907/2006), as amended for GB.

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

3M Steri-Gas Sterilisation Cartridges

#### Product Identification Numbers

70-2007-8377-0	70-2007-8380-4	70-2007-8383-8
7100042033	7100042034	7100042035

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### Identified uses

Gas to sterilize in a 3M Steri-Vac(TM) Ethylene Oxide Sterilizer

#### 1.3. Details of the supplier of the safety data sheet

<b>Address:</b>	3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
<b>Telephone:</b>	+44 (0)1344 858 000
<b>E Mail:</b>	tox.uk@mmm.com
<b>Website:</b>	www.3M.com/uk

#### 1.4. Emergency telephone number

+44 (0)1344 858 000

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

#### CLASSIFICATION:

Flammable Gases, Category 1A - Flam. Gas 1A; H220  
 Gas Under Pressure, Press. Gas (Liq.); H280  
 Acute Toxicity, Category 3 - Acute Tox. 3; H301  
 Acute Toxicity, Category 3 - Acute Tox. 3; H331  
 Skin Corrosion/Irritation, Category 1 - Skin Corr. 1; H314  
 Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318  
 Germ Cell Mutagenicity, Category 1B - Muta. 1B; H340  
 Carcinogenicity, Category 1B - Carc. 1B; H350  
 Reproductive Toxicity, Category 1B - Repr. 1B; H360FD  
 Specific Target Organ Toxicity-Repeated Exposure, Category 1 - STOT RE 1; H372  
 Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336  
 Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335

For full text of H phrases, see Section 16.

**2.2. Label elements**

**The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain**

**SIGNAL WORD**

DANGER.

**Symbols**

GHS02 (Flame) | GHS04 (Gas cylinder) | GHS05 (Corrosion) | GHS06 (Skull and crossbones) | GHS08 (Health Hazard) |

**Pictograms**



Ingredient	CAS Nbr	EC No.	% by Wt
ethylene oxide	75-21-8	200-849-9	<= 100

**HAZARD STATEMENTS:**

H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.
H301 + H331	Toxic if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage.
H340	May cause genetic defects.
H350	May cause cancer.
H360Fd	May damage fertility. Suspected of damaging the unborn child
H336	May cause drowsiness or dizziness.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure: nervous system.

**PRECAUTIONARY STATEMENTS**

**Prevention:**

P201	Obtain special instructions before use.
P260C	Do not breathe gas.
P280J	Wear protective gloves, protective clothing, respiratory protection, and eye/face protection.

**Response:**

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTRE or doctor/physician.  
P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P410 Protect from sunlight.

**For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:**

**<=125 ml Hazard statements**

H220 Extremely flammable gas.  
H301 + H331 Toxic if swallowed or if inhaled.  
H314 Causes severe skin burns and eye damage.  
H340 May cause genetic defects.  
H350 May cause cancer.  
H360Fd May damage fertility. Suspected of damaging the unborn child  
H336 May cause drowsiness or dizziness.  
H335 May cause respiratory irritation.  
H372 Causes damage to organs through prolonged or repeated exposure: nervous system.

**<=125 ml Precautionary statements**

**Prevention:**

P201 Obtain special instructions before use.  
P260C Do not breathe gas.  
P280J Wear protective gloves, protective clothing, respiratory protection, and eye/face protection.

**Response:**

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTRE or doctor/physician.  
P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

**SUPPLEMENTAL INFORMATION:**

**Supplemental Precautionary Statements:**

Restricted to professional users.

**2.3. Other hazards**

May cause frostbite.  
This material does not contain any substances that are assessed to be a PBT or vPvB

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP], as amended for GB
ethylene oxide	(CAS-No.) 75-21-8 (EC-No.) 200-849-9	<= 100	Flam. Gas 1A, H220 Liquified gas, H280 Acute Tox. 3, H331(LC50 = 700 ppm **ATE values per GB MCL**) Acute Tox. 3, H301(LD50 = 100 mg/kg **ATE values per GB MCL**) Skin Corr. 1, H314 Eye Dam. 1, H318 Muta. 1B, H340 Carc. 1B, H350 Repr. 1B, H360Fd STOT SE 3, H336 STOT SE 3, H335 STOT RE 1, H372 Nota U Chem. Unst. Gas A, H230 Repr. 1B, H360Fd

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

**3.2. Mixtures**

Not applicable

**SECTION 4: First aid measures****4.1. Description of first aid measures****Inhalation**

Remove person to fresh air. Get medical attention.

**Skin contact**

Immediately flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

**Eye contact**

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

**If swallowed**

Rinse mouth. Do not induce vomiting. Get immediate medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**

The most important symptoms and effects based on the GB CLP classification include:

Toxic if inhaled. Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Skin burns (localized redness, swelling, itching, intense pain, blistering, and tissue destruction). Toxic if

swallowed. Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness). Target organ effects. See Section 11 for additional details.

**4.3. Indication of any immediate medical attention and special treatment required**

Not applicable

**SECTION 5: Fire-fighting measures**

**5.1. Extinguishing media**

In case of fire: Use a water spray or fog to extinguish, do not use straight streams. If water is not available use dry chemical, CO<sub>2</sub>, or foam to extinguish. Refer to other precautionary advice in SDS section 5. Use a fire fighting agent suitable for the surrounding fire.

**5.2. Special hazards arising from the substance or mixture**

Closed containers exposed to heat from fire may build pressure and explode.

**Hazardous Decomposition or By-Products**

Substance

Carbon monoxide  
Carbon dioxide.

Condition

During combustion.  
During combustion.

**5.3. Advice for fire-fighters**

Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Eliminate all ignition sources if safe to do so. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. Close cylinder. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

**6.4. Reference to other sections**

Refer to Section 8 and Section 13 for more information

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

For industrial/occupational use only. Not for consumer sale or use. Do not use in a confined area with minimal air exchange. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Eliminate all ignition sources if safe to do so. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use

personal protective equipment (eg. gloves, respirators...) as required. Recommendations for storing Steri-Gas cartridges are stringent. Check your local fire protection codes for additional requirements. Keep all sources of ignition such as matches, lighted cigarettes, sparks and static discharge away from the sterilizer and cartridges. Store cartridges in an upright position. Keep only one day's requirement or a maximum of twelve(12) cartridges (one box) in the immediate sterilizer area. This area needs to have at least ten air changes per hour. Additional Steri-Gas cartridges should be stored in an approved flammable liquid storage cabinet vented to the outside atmosphere, or in an area suitable for storage of flammable liquids appropriately vented to the outside atmosphere, or into a non-recirculating, continuously operating, dedicated exhaust system.

### 7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Store away from heat. Do not expose to temperatures exceeding 50 °C/122°F. Store away from acids. Store away from oxidising agents. Store away from areas where product may come into contact with food or pharmaceuticals.

### 7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
ethylene oxide	75-21-8	UK HSC	TWA:1.8 mg/m <sup>3</sup> (1 ppm)	SKIN

UK HSC : UK Health and Safety Commission

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

#### Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

### 8.2. Exposure controls

#### 8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

#### 8.2.2. Personal protective equipment (PPE)

##### Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Full face shield.

Indirect vented goggles.

##### Applicable Norms/Standards

Use eye/face protection conforming to EN 166

##### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions.

### 3M Steri-Gas Sterilisation Cartridges

Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended:

Material	Thickness (mm)	Breakthrough Time
Polymer laminate - PE/EVAL/PE	No data available	> 8 hours
Polymer laminate	No data available	1-4 hours

The glove data presented are based on the substance driving dermal toxicity and the conditions present at the time of testing. Breakthrough time may be altered when the glove is subjected to use conditions that place additional stress on the glove.

#### *Applicable Norms/Standards*

Use gloves tested to EN 374

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

#### **Respiratory protection**

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:  
Half facepiece or full facepiece supplied-air respirator

For questions about suitability for a specific application, consult with your respirator manufacturer.

#### *Applicable Norms/Standards*

Use a respirator conforming to EN 140 or EN 136

#### **Thermal hazards**

Wear cold insulating gloves/face shield/eye protection.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Physical state</b>	Gas.
<b>Specific Physical Form:</b>	Compressed gas.
<b>Colour</b>	Colourless
<b>Odor</b>	Sweet Odor
<b>Odour threshold</b>	<i>No data available.</i>
<b>Melting point/freezing point</b>	<i>Not applicable.</i>
<b>Boiling point/boiling range</b>	10.6 °C
<b>Flammability (solid, gas)</b>	Flammable gas: Category 1.
<b>Flammable Limits(LEL)</b>	3 % volume
<b>Flammable Limits(UEL)</b>	100 % volume
<b>Flash point</b>	-20 °C [ <i>Test Method:Tagliabue closed cup</i> ]
<b>Autoignition temperature</b>	428.9 °C [ <i>Details:CONDITIONS: Burns in the absence of air</i> ]
<b>Decomposition temperature</b>	<i>Not applicable.</i>
<b>pH</b>	7
<b>Kinematic Viscosity</b>	<i>Not applicable.</i>
<b>Water solubility</b>	Complete
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>

Vapour pressure	145,854.3 Pa [@ 20 °C ]
Density	<i>Not applicable.</i>
Relative density	0.87 [Ref Std: WATER=1] [Details:@ 20 °C]
Relative Vapour Density	1.49 [Ref Std: AIR=1]
Particle Characteristics	<i>Not applicable.</i>

## 9.2. Other information

### 9.2.1 Information with regard to physical hazard classes

#### Explosive properties

Gas under pressure: Liquefied gas.

### 9.2.2 Other safety characteristics

#### EU Volatile Organic Compounds

*No data available.*

#### Evaporation rate

*Not applicable.*

#### Molecular weight

*No data available.*

#### Percent volatile

100 %

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is considered to be non reactive under normal use conditions

### 10.2 Chemical stability

Stable.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation may occur.

### 10.4 Conditions to avoid

Heat.

### 10.5 Incompatible materials

None known.

### 10.6 Hazardous decomposition products

#### Substance

#### Condition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

The information below may not agree with the material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

### 11.1. Information on hazard classes as defined in the retained CLP Regulation (EU) No 1272/2008, as amended for Great Britain.

#### Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

#### Inhalation



Toxic if inhaled.

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

**Skin contact**

Frostbite: Signs/symptoms may include intense pain, discoloration of skin, and tissue destruction. Corrosive (skin burns): Signs/symptoms may include localised redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

**Eye contact**

Frostbite: Signs/symptoms may include intense pain, clouding of the cornea, redness, swelling, and blindness. Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

**Ingestion**

Toxic if swallowed.

Gastrointestinal corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea; blood in the faeces and/or vomitus may also be seen.

**Additional Health Effects:**

**Single exposure may cause target organ effects:**

Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness. Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

**Prolonged or repeated exposure may cause target organ effects:**

Ocular effects: Signs/symptoms may include blurred or significantly impaired vision. Peripheral neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of the hands and feet, tremors and muscle atrophy. Kidney/Bladder effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

**Reproductive/Developmental Toxicity:**

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

**Genotoxicity:**

Genotoxicity and Mutagenicity: May interact with genetic material and possibly alter gene expression.

**Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

**Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

Name	Route	Species	Value
ethylene oxide	Inhalation-Gas (4 hours)	official classification	LC50 700 ppm
ethylene oxide	Ingestion	official classification	LD50 100 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
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**3M Steri-Gas Sterilisation Cartridges**

ethylene oxide	Human and animal	Corrosive
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**Serious Eye Damage/Irritation**

Name	Species	Value
ethylene oxide	similar health hazards	Corrosive

**Skin Sensitisation**

Name	Species	Value
ethylene oxide	Human and animal	Not classified

**Respiratory Sensitisation**

Name	Species	Value
ethylene oxide	Human	Not classified

**Germ Cell Mutagenicity**

Name	Route	Value
ethylene oxide	In vivo	Mutagenic

**Carcinogenicity**

Name	Route	Species	Value
ethylene oxide	Inhalation	Multiple animal species	Carcinogenic.

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
ethylene oxide	Inhalation	Toxic to development	Rat	NOAEL 33 ppm	during organogenesis
ethylene oxide	Inhalation	Toxic to female reproduction	Rat	NOAEL 33 ppm	1 generation
ethylene oxide	Inhalation	Toxic to male reproduction	Monkey	LOAEL 50 ppm	2 years

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
ethylene oxide	Inhalation	respiratory system	Causes damage to organs	Human and animal	NOAEL Not available	
ethylene oxide	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
ethylene oxide	Inhalation	respiratory irritation	May cause respiratory irritation		NOAEL Not available	

**3M Steri-Gas Sterilisation Cartridges****Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
ethylene oxide	Inhalation	peripheral nervous system	Causes damage to organs through prolonged or repeated exposure	Human and animal	NOAEL Not available	
ethylene oxide	Inhalation	kidney and/or bladder	May cause damage to organs though prolonged or repeated exposure	Mouse	LOAEL 100 ppm	14 weeks
ethylene oxide	Inhalation	eyes	May cause damage to organs though prolonged or repeated exposure	Human and animal	NOAEL Not available	
ethylene oxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Mouse	LOAEL 200 ppm	14 weeks
ethylene oxide	Inhalation	endocrine system	Not classified	Rat	NOAEL 100 ppm	2 years
ethylene oxide	Inhalation	liver	Not classified	Multiple animal species	NOAEL 841 ppm	not available
ethylene oxide	Inhalation	hematopoietic system	Not classified	Mouse	NOAEL 250 ppm	10 weeks
ethylene oxide	Inhalation	immune system	Not classified	Mouse	LOAEL 200 ppm	14 weeks
ethylene oxide	Inhalation	heart	Not classified	Monkey	NOAEL 100 ppm	2 years

**Aspiration Hazard**

For the component/components, either no data is currently available or the data is not sufficient for classification.

**Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.**

**11.2. Information on other hazards**

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

**SECTION 12: Ecological information**

The information below may not agree with the material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

**12.1. Toxicity**

Material	Organism	Type	Exposure	Test endpoint	Test result
3M Steri-Gas Sterilisation Cartridges	Water flea	Laboratory	48 hours	N/A	137 mg/l
3M Steri-Gas Sterilisation Cartridges	Fathead minnow	Laboratory	96 hours	N/A	84 mg/l
3M Steri-Gas Sterilisation Cartridges	Goldfish	Laboratory	24 hours	N/A	90 mg/l

**12.2. Persistence and degradability**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
ethylene oxide	75-21-8	Experimental Biodegradation	28 days	BOD	107 %BOD/ThOD	OECD 301C - MITI test (I)
ethylene oxide	75-21-8	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	12.9 days (t 1/2)	

**12.3 : Bioaccumulative potential**

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
ethylene oxide	75-21-8	Experimental Bioconcentration		Log Kow	-0.3	OECD 107 log Kow shke flsk mtd

**12.4. Mobility in soil**

Material	Cas No.	Test type	Study Type	Test result	Protocol
ethylene oxide	75-21-8	Modeled Mobility in Soil	Koc	3 l/kg	Episuite™

**12.5. Results of the PBT and vPvB assessment**

This material does not contain any substances that are assessed to be a PBT or vPvB

**12.6. Other adverse effects**

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal facility. The facility should be equipped to handle gaseous waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

**EU waste code (product as sold)**

16 05 04\* Gases in pressure containers (including halons) containing dangerous substances

**EU waste code (product container after use)**

15 01 04 Metallic packaging

**SECTION 14: Transportation information**

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
<b>14.1 UN number</b>	UN1040	UN1040	UN1040
<b>14.2 UN proper shipping name</b>	ETHYLENE OXIDE	ETHYLENE OXIDE	ETHYLENE OXIDE
<b>14.3 Transport hazard class(es)</b>	2.3(2.1)	2.3(2.1)	2.3(2.1)

**3M Steri-Gas Sterilisation Cartridges**

<b>14.4 Packing group</b>	Not applicable.	Not applicable.	Not applicable.
<b>14.5 Environmental hazards</b>	Not Environmentally Hazardous	Not applicable	Not a Marine Pollutant
<b>14.6 Special precautions for user</b>	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
<b>14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code</b>	No data available.	No data available.	No data available.
<b>Control Temperature</b>	No data available.	No data available.	No data available.
<b>Emergency Temperature</b>	No data available.	No data available.	No data available.
<b>ADR Classification Code</b>	2TF	Not applicable.	Not applicable.
<b>IMDG Segregation Code</b>	Not applicable.	Not applicable.	NONE

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Carcinogenicity**  
**Ingredient**

**CAS Nbr**

**Classification**

**Regulation**

ethylene oxide

75-21-8

Carc. 1B

The retained CLP Regulation (EU) No 1272/2008, as amended for Great Britain, UK Mandatory Classification and Labelling list

ethylene oxide

75-21-8

Grp. 1: Carcinogenic to humans

International Agency for Research on Cancer

**Global inventory status**

Contact 3M for more information.

**COMAH Regulation, SI 2015/483**

Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of	
	Lower-tier requirements	Upper-tier requirements
H2 ACUTE TOXICITY	50	200

**3M Steri-Gas Sterilisation Cartridges**

P2 FLAMMABLE GASES	10	50
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Seveso named dangerous substances, Annex 1, Part 2

Dangerous Substances	Identifier(s)	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
ethylene oxide	75-21-8	5	50

**Regulation (EU) No 649/2012, as amended for GB**

Chemical	Identifier(s)	Annex I
ethylene oxide	75-21-8	Part 1 and Part 3

**15.2. Chemical Safety Assessment**

A chemical safety assessment has been carried out for this substance/mixture in accordance with Regulation (EC) No 1907/2006, as amended for GB.

**SECTION 16: Other information****List of relevant H statements**

H220	Extremely flammable gas.
H230	May react explosively even in the absence of air.
H280	Contains gas under pressure; may explode if heated.
H301	Toxic if swallowed.
H301 + H331	Toxic if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H350	May cause cancer.
H360Fd	May damage fertility. Suspected of damaging the unborn child
H360Fd2	May damage fertility. Suspected of damaging the unborn child
H372	Causes damage to organs through prolonged or repeated exposure.
H372	Causes damage to organs through prolonged or repeated exposure: nervous system.

**Revision information:**

GB Section 04: First Aid - Symptoms and Effects (GB CLP) information was modified.

Section 8: glove data value information was added.

Section 8: glove data value information was modified.

Section 09: Particle Characteristics N/A information was added.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

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