

# Safety Data Sheet

Prepared in accordance with Commission Regulation (EU) 2020/878 amending Annex II of Regulation (EC) No 1907/2006



Stock Number: 30620

Revision Date: 11-06-2024

This document replaces SDS dated: 03-05-2023

2 Letter ISO country code/language code: UK/EN

## Ethylene Oxide Standard

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

1.1 Product identifier: **Ethylene Oxide Standard**

Stock Number: 30620

Other means of identification:

Synonyms: None Known

REACH Registration No.: None Known

Molecular formula: CH<sub>2</sub>Cl<sub>2</sub>

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

Relevant identified uses: For Laboratory use only

Uses advised against: After February 3, 2025, this chemical substance (as defined in TSCA section 3(2))/ product cannot be distributed in commerce to retailers. After January 28, 2026, this chemical substance (as defined in TSCA section 3(2))/product is and can only be distributed in commerce or processed with a concentration of methylene chloride equal to or greater than 0.1% by weight for the following purposes: (1) Processing as a reactant; (2) Processing for incorporation into a formulation, mixture, or reaction product; (3) Processing for repackaging; (4) Processing for recycling; (5) Industrial or commercial use as a laboratory chemical; (6) Industrial or commercial use as a bonding agent for solvent welding; (7) Industrial and commercial use as a paint and coating remover from safety critical, corrosion-sensitive components of aircraft and spacecraft; (8) Industrial and commercial use as a processing aid; (9) Industrial and commercial use for plastic and rubber products manufacturing; (10) Industrial and commercial use as a solvent that becomes part of a formulation or mixture, where that formulation or mixture will be used inside a manufacturing process, and the solvent (methylene chloride) will be reclaimed; (11) Industrial and commercial use in the refinishing for wooden furniture, decorative pieces, and architectural fixtures of artistic, cultural or historic value until May 8, 2029; (12) Industrial and commercial use in adhesives and sealants in aircraft, space vehicle, and turbine applications for structural and safety critical non-structural applications until May 8, 2029; (13) Disposal; and (14) Export.

1.3 Details of the Supplier of the Safety Data Sheet:

**Manufacturer**

Restek Corporation

**Supplier**

Thames Restek UK LTD

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	110 Benner Circle Bellefonte, Pa. 16823 USA 00 1 814-353-1300 00 1 814-353-1309 sds@restek.com 00 1 800-424-9300 (CHEMTREC within the US)	Units 8-16, Ministry Wharf Wycombe Road, Saunderton Buckinghamshire United Kingdom HP14 4HW 01494 563377 sales@thamesrestek.co.uk 0870-8200418 (CHEMTREC within the UK)
<b>1.4 Emergency telephone number:</b>	00 1 703-741-5970 (Outside USA)	+1 703-741-5970 (CHEMTREC International)
<b>Poison Centre contact information:</b>	National Poisons Information Service (NPIS) Email: <a href="mailto:director.birmingham.unit@npis.org">director.birmingham.unit@npis.org</a> Website: <a href="http://www.npis.org/">http://www.npis.org/</a>	

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture:

**Classification according to Regulation (EC) No 1272/2008 [CLP]:** Germ Cell Mutagenicity Category 1B  
Carcinogenicity Category 1B  
Acute Toxicity - Oral Category 4

### 2.2 Label elements:

**Labelling according to Regulation (EC) No 1272/2008 [CLP]:**

Hazard pictograms:



**Signal Word:**

Danger

**Hazard Statements:**

H302 - Harmful if swallowed  
H340 - May cause genetic defects.  
H350 - May cause cancer.

**Precautionary Statements:**

P201 - Obtain special instructions before use.  
P280 - Wear protective gloves/protective clothing/eye protection/face

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protection.

P308+P313 - IF exposed or concerned: Get medical advice/ attention.

P330 - Rinse mouth.

P270 - Do not eat, drink or smoke when using this product.

P301+P312 - IF SWALLOWED: Call a POISON CENTER/doctor/ if you feel unwell.

Supplemental Hazard information (EU): None Known

2.3 Other hazards: This substance does not meet the PBT or vPvB criteria of REACH, Annex XIII

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances:

Not applicable

#### 3.2 Mixtures:

Chemical Name	%	CAS #	EC No. REACH Registration No.	Classification (EC) No 1272/2008	M Factor	SCL	Acute Toxicity Estimates
Methylene chloride (dichloromethane)	95	75-09-2	200-838-9  None Known	Acute Tox. 4 (Oral); H302 Carc. 2; H351	No data available	No data available	Not determined
Ethylene oxide	5	75-21-8	200-849-9  None Known	Acute Tox. 3 (Inh Gas); H331 Acute Tox. 3 (Inh Dust/Mist); H331 Acute Tox. 3 (Oral); H301 Carc. 1B; H350 Press. Gas (*); H280 Eye Irrit. 2; H319 Flam. Gas 1; H220	No data available	No data available	Not determined

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				Flam. Liq. 1; H224 Muta. 1B; H340 Skin Irrit. 2; H315 STOT SE 3; H335			
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For full text of H-statements see Section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures:

**Inhalation:**

Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual administer oxygen. Get medical attention immediately.

**Eye contact:**

Continue to flush eyes while awaiting medical attention Serious harm (damage) may result if treatment is delayed. Immediately flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention and monitor the eye daily as advised by your physician. Immediately flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention and monitor the eye daily as advised by your physician.

**Skin Contact:**

Wash with soap and water. Remove contaminated clothing, launder immediately, and discard contaminated leather goods. Get medical attention immediately.

**Ingestion:**

Never give anything by mouth to an unconscious person Do not induce vomiting and seek medical attention immediately. Drink two glasses of water or milk to dilute. Provide medical care provider with this SDS.

**Self protection of the first aider:**

No data available

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

Harmful if swallowed

**4.3 Indication of any immediate medical attention and special treatment needed:**

No additional first aid information available

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media:

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### Suitable extinguishing media:

Use methods suitable to fight surrounding fire.

Use alcohol resistant foam, carbon dioxide, or dry chemical when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the surface of the fire. Do Not direct a stream of water into the hot burning liquid.

### Unsuitable extinguishing media:

None Known

### 5.2 Special hazards arising from the substance or mixture:

Non-flammable

### Hazardous Combustion Products:

Carbon dioxide, Carbon monoxide

### 5.3 Advice for firefighters:

Use methods for the surrounding fire.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures:

#### Non-emergency personnel:

Non-emergency personnel should be kept clear of the area

#### Emergency responders:

Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.

### 6.2 Environmental precautions:

No data available

### 6.3 Methods and material for containment and cleaning up:

#### Small spills:

Refer to information provided for large spills

#### Large spills:

Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

### 6.4 Reference to other sections:

Refer to section 13 for disposal information

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling:

Toxic or severely irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area.

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### 7.2 Conditions for safe storage, including any incompatibilities:

**Conditions for safe storage:** Store in a cool dry ventilated location. Isolate from incompatible materials and conditions. Keep container(s) closed.

**Materials to Avoid/Chemical Incompatibility:** Strong oxidizing agents, Caustics (bases)

**7.3 Specific end use(s):** For Laboratory use only

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters:

#### Occupational Exposure limit values:

Chemical Name	United Kingdom - Workplace Exposure Limits (WELs) - TWAs	United Kingdom - Workplace Exposure Limits (WELs) - STELs	United Kingdom - Biological Monitoring Guidance Values
Methylene chloride (dichloromethane)	100 ppm TWA; 350 mg/m <sup>3</sup> TWA	300 ppm STEL; 1060 mg/m <sup>3</sup> STEL	30 ppm Medium: end-tidal breath Time: post shift Parameter: Carbon monoxide
Ethylene oxide	1 ppm TWA; 1.8 mg/m <sup>3</sup> TWA	3 ppm STEL (calculated); 5.4 mg/m <sup>3</sup> STEL (calculated)	No data available

**DNEL:** None Known

**PNEC:** None Known

### 8.2 Exposure controls:

**Appropriate engineering controls:** Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

#### Individual protection measures, such as personal protective equipment:

**Eye and face protection:** Wear chemically resistant safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Do not wear contact lenses. Have an eye wash station available.

Wear chemically resistant safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles

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and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Do not wear contact lenses. Have an eye wash station available.

### Skin Protection:

Hand protection:

No information available

Other skin protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

### Respiratory Protection:

Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms.

### Respirator Type(s):

None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.

### Thermal Hazards:

Not applicable

### Environmental exposure controls:

No data available

## SECTION 9: Physical and chemical properties

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

Appearance:

No data available

Colour:

Colourless

Odour and odour threshold:

Strong

Odour threshold:

ND

pH:

Not applicable

### Melting Point/Freezing Point (°C):

Melting point (°C):

No data available

Freezing point (°C):

No data available

Initial boiling point and boiling range (°C):

10

Flash point (°C):

-20

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Evaporation Rate (water = 1):	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits:	
Upper flammable or explosive limit, % in air:	100
Lower flammable or explosive limit, % in air:	3
Vapour pressure:	No data available
Vapor Density (Air=1):	2.93
Relative density (water = 1):	1.3254 - 1.3258 g/cm <sup>3</sup> at 20 °C
Solubility(ies):	Complete; 100% Moderate; 50-99%
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature (°C):	556
Decomposition temperature (°C):	No data available
Viscosity:	0
Explosive properties:	No data available
Oxidizing properties:	No data available

### 9.2 Other information:

Volatile Organic Chemicals:	100
Bulk density:	10.114

## SECTION 10: Stability and reactivity

10.1 Reactivity:	Not expected to be reactive
10.2 Chemical stability:	Stable under normal conditions.
10.3 Possibility of hazardous reactions:	None expected under standard conditions of storage
10.4 Conditions to avoid:	High temperatures, Contamination
10.5 Incompatible materials:	Strong oxidizing agents, Caustics (bases)
10.6 Hazardous decomposition products:	Carbon dioxide, Carbon monoxide

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects:



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### Acute toxicity:

Chemical Name	ORAL LD50 (rat)	DERMAL LD50 (rabbit)	INHALATION LC50 (rat)
Methylene chloride (dichloromethane)	ORAL LD50 Rat 1600 mg/kg	DERMAL LD50 Rat > 2000 mg/kg	INHALATION LC50-6H Rat 53 MG/L
Ethylene oxide	ORAL LD50 Rat 72 mg/kg	No data available	INHALATION LC50-4H Rat 800 ppm

Classification has been based on toxicological information of the components in Section 3.

### Skin corrosion/irritation:

Based on available data, the classification criteria are not met.

### Serious eye damage/irritation:

Based on available data, the classification criteria are not met.

### Respiratory or skin sensitisation:

Based on available data, the classification criteria are not met.

### Germ cell mutagenicity:

Classification has been based on toxicological information of the components in Section 3.

### Carcinogenicity:

Classification has been based on toxicological information of the components in Section 3.

### Reproductive toxicity:

Based on available data, the classification criteria are not met.

### STOT-single exposure:

Based on available data, the classification criteria are not met.

### STOT-repeated exposure:

Based on available data, the classification criteria are not met.

### Aspiration hazard:

Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1 Toxicity:

Moderate ecological hazard. This product may be dangerous to plants

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and/or wildlife.  
Keep out of waterways.

### Ecological Toxicity Data:

Chemical Name	CAS #	Aquatic EC50 Crustacea	Aquatic ERC50 Algae	Aquatic LC50 Fish
No data available				

- 12.2 Persistence and degradability: No data  
No data
- 12.3 Bioaccumulative potential: No data
- 12.4 Mobility in soil: No data
- 12.5 Results of PBT and vPvB assessment: No data available
- 12.6 Other adverse effects: None Known
- 12.7 Additional information: No data available

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods:

- Disposal methods: Spent or discarded material is a hazardous waste.  
Incinerate spent or discarded material a permitted hazardous waste facility.
- Waste codes / waste designations according to LoW: No data available

### SECTION 14: Transport information

#### International carriage of dangerous goods by road (ADR), rail or inland waterways:

- 14.1 UN number: UN2810
- 14.2 UN proper shipping name: Toxic, liquids, organic, n.o.s. (Dichloromethane)
- 14.3 Transport hazard class(es): 6.1
- 14.4 Packing group: III

#### International carriage of dangerous goods by air (IATA):

- 14.1 UN number: UN2810
- 14.2 UN proper shipping name: Toxic, liquids, organic, n.o.s. (Dichloromethane)
- 14.3 Transport hazard class(es): 6.1

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- 14.4 Packing group: III
- 14.5 Environmental hazards: No
- 14.6 Special precautions for user: No data available
- 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: No data available

### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Chemical Name	EINECS	SVHC
Methylene chloride (dichloromethane)	Yes	No
Ethylene oxide	Yes	No

- 15.2 Chemical Safety Assessment: No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

### SECTION 16: Other information

Revision Date: 11-06-2024

Indication of changes: Any changes to the SDS compared to previous versions are marked by a vertical line in front of the concerned paragraph.

Abbreviations and acronyms:

- CAS = Chemical Abstract Service
- DNEL= Derivative No Effect Level
- EC= European Community
- EINECS = European Inventory of Existing Chemical Substances
- MSHA = Mine Safety Health Administration
- NIOSH = National Institute of Occupational Safety & Health
- OEL = Occupational Exposure Limit
- PBT= Persistent, Bioaccumulative, Toxic
- PNEC= Predicted No Effect Concentration
- SCOEL= Scientific Committee on Occupational Exposure Limits
- TLV = Threshold Limit Value
- TWA= Time Weighted Average
- vPvB= Very Persistent, Very Bioaccumulative

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Wt.% = Weight Percent

**Key literature references and sources for data:**

No data available

**Hazard phrase(s) referenced in section 3**

H340 - May cause genetic defects.

H350 - May cause cancer.

H351 - Suspected of causing cancer.

H220 - Extremely flammable gas

H224 - Extremely flammable liquid and vapour

H280 - Contains gas under pressure; may explode if heated

H301+H331 - Toxic if swallowed or if inhaled

H302 - Harmful if swallowed

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

**Precautionary Statements:**

**Prevention:**

P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P264 - Wash thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

P301+P312 - IF SWALLOWED: Call a POISON CENTER/doctor/ if you feel unwell.

P308+P313 - IF exposed or concerned: Get medical advice/ attention.

P330 - Rinse mouth.

**Storage:**

P405 - Store locked up.

**Disposal:**

P501 - Dispose of contents/container to a suitable disposal site in accordance with local/national/international regulations.

**Disclaimer of Liability:**

Restek Corporation provides the descriptions, data and information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. It is provided for your guidance only.

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Because many factors may affect processing or application/use, Restek Corporation recommends you perform an assessment to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either expressed or implied, including fitness for a particular purpose, are made regarding products described, data or information set forth. In no case shall the descriptions, information, or data provided be considered a part of our terms and conditions of sale. Further, the descriptions, data and information furnished hereunder are given gratis. No obligation or liability for the description, data and information given are assumed. All such being given and accepted at your risk.