MATERIAL SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Date of issue: 02/05/2013 Version 1.0

SECTION 1. Identification

Product identifier

Product number	807291
Product code	807291
Product name	Ethylene glycol monophenyl ether for synthesis

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

Identified uses	Chemical for synthesis

Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation | 290 Concord Road, Billerica, MA 01821, United States of America | SDS Phone Support: +1-978-715-1335 | General Inquiries: +1-978-715-4321 | Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) e-mail: mm_sds@merckgroup.com
Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2. Hazards identification

GHS Classification

Acute toxicity, Category 4, Oral, H302
Eye irritation, Category 2, H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

Hazard pictograms



Signal Word
Warning

Hazard Statements
H302 Harmful if swallowed.

H319 Causes serious eye irritation.

Precautionary Statements
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

OSHA Hazards
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Other hazards
None known.

SECTION 3. Composition/information on ingredients

Formula	$C_6H_5OCH_2CH_2OH$	$C_8H_{10}O_2$ (Hill)
CAS-No.	122-99-6	
Molar mass	138.16 g/mol	

Hazardous ingredients
Chemical Name (Concentration)
CAS-No.
2-Phenoxyethanol (>= 90 % - <= 100 %)
122-99-6

SECTION 4. First aid measures

Description of first-aid measures
Inhalation
After inhalation: fresh air.

Skin contact
After skin contact: wash off with plenty of water. Remove contaminated clothing.

Eye contact
After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

Ingestion
After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed
irritant effects, Cough, Shortness of breath
The following applies to ethers in general: the uptake of large quantities is followed by narcosis, cardiovascular disorders. Nausea and vomiting after swallowing.

Indication of any immediate medical attention and special treatment needed
No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
Water, Carbon dioxide (CO2), Foam, Dry powder

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture
Combustible material, Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gases or vapors possible in the event of fire.

Advice for firefighters
Special protective equipment for fire-fighters
In the event of fire, wear self-contained breathing apparatus.

Further information
Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid substance contact. Do not breathe vapors, aerosols. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

Environmental precautions
Do not empty into drains.

Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills.
Observe possible material restrictions (see sections 7 and 10).
Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

SECTION 7. Handling and storage

Precautions for safe handling
Observe label precautions.

Conditions for safe storage, including any incompatibilities
Tightly closed.

Store at +15°C to +25°C (+59°F to +77°F).

SECTION 8. Exposure controls/personal protection

Exposure limit(s)
Contains no substances with occupational exposure limit values.

Engineering measures
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures
Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

Eye/face protection
Safety glasses

Hand protection
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Other protective equipment:
protective clothing

Respiratory protection
required when vapors/aerosols are generated.
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

Physical state	liquid
Color	colorless
Odor	weakly aromatic
Odor Threshold	No information available.
pH	ca. 7 at 10 g/l 73 °F (23 °C)
Melting point	ca. 13 °C
Boiling point/boiling range	471 - 482 °F (244 - 250 °C) at 1,013 hPa
Flash point	ca. 250 °F (121 °C) DIN 51758
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	1.4 %(V)

Upper explosion limit	9.0 %(V)
Vapor pressure	0.04 hPa at 68 °F (20 °C)
Relative vapor density	4.77
Relative density	1.11 g/cm³ at 68 °F (20 °C)
Water solubility	24 g/l at 68 °F (20 °C)
Partition coefficient: n-octanol/water	log Pow: 1.16 (experimental) (Lit.) Bioaccumulation is not expected (log Pow <1).
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	30 mPa.s at 68 °F (20 °C)
Explosive properties	No information available.
Ignition temperature	995 °F (535 °C) DIN 51794

SECTION 10. Stability and reactivity

Reactivity
Forms explosive mixtures with air on intense heating.
Formation of peroxides possible.

Chemical stability
Sensitive to air.

Possibility of hazardous reactions
Violent reactions possible with:
Oxidizing agents, Acid anhydrides

Conditions to avoid
Strong heating.
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

Incompatible materials
no information available

Hazardous decomposition products
Peroxides

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure
Eye contact, Skin contact

Acute oral toxicity
LD50 rat: 1,850 mg/kg (Lit.)

absorption

Acute inhalation toxicity

Symptoms: Possible damages:, Irritation symptoms in the respiratory tract.

Acute dermal toxicity
LD50 rabbit: > 2,000 mg/kg
(External MSDS)

absorption

Skin irritation
rabbit
Result: No irritation
OECD Test Guideline 404

Eye irritation
rabbit
Result: Eye irritation
OECD Test Guideline 405

Causes serious eye irritation.

Sensitization
Patch test: human
Result: negative
(IUCLID)

Sensitization test: guinea pig
Result: negative
Method: OECD Test Guideline 406

Genotoxicity in vivo
Mutagenicity (mammal cell test): micronucleus.
Result: negative
(IUCLID)

Genotoxicity in vitro
Ames test
Result: negative
(IUCLID)

Specific target organ systemic toxicity - single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard
Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information
After absorption:
We have no description of any toxic symptoms.
Other information
The following applies to ethers in general: the uptake of large quantities is followed by narcosis, cardiovascular disorders. Nausea and vomiting after swallowing.
Further data:
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Ecotoxicity

Toxicity to fish
LC50 Leuciscus idus (Golden orfe): 220 - 460 mg/l; 96 h (IUCLID)

Toxicity to daphnia and other aquatic invertebrates
EC50 Daphnia magna (Water flea): > 500 mg/l; 48 h (IUCLID)

Toxicity to algae
IC50 Desmodesmus subspicatus (green algae): > 500 mg/l; 72 h (IUCLID)

Toxicity to bacteria
EC10 activated sludge: 320 mg/l; 17 h
OECD Test Guideline 209

Persistence and degradability

Biodegradability

Easily eliminable.

82 %; 17 d
OECD Test Guideline 302B

90 - 100 %; 15 d
OECD Test Guideline 301A

Chemical Oxygen Demand (COD)
2.127 mg/g

Theoretical oxygen demand (ThOD)
2,200 mg/g

Bioaccumulative potential
Partition coefficient: n-octanol/water
log Pow: 1.16
(experimental)
(Lit.) Bioaccumulation is not expected (log Pow <1).

Mobility in soil
No information available.

Other adverse effects
Additional ecological information
Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)
Not classified as dangerous in the meaning of transport regulations.

Air transport (IATA)
Not classified as dangerous in the meaning of transport regulations.

Sea transport (IMDG)
Not classified as dangerous in the meaning of transport regulations.

SECTION 15. Regulatory information

United States of America

OSHA Hazards
Harmful if swallowed.
Eye irritant

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

SARA 311/312 Hazards
Acute Health Hazard

SARA 313

The following components are subject to reporting levels established by SARA Title III, Section 313:

Ingredients

2-Phenoxyethanol	122-99-6

SARA 302

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

Massachusetts Right To Know

Remarks

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Ingredients

2-Phenoxyethanol

New Jersey Right To Know

Ingredients

2-Phenoxyethanol

Notification status

TSCA:	On TSCA Inventory
DSL:	All components of this product are on the Canadian DSL.

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Full text of H-Statements referred to under sections 2 and 3.

H302	Harmful if swallowed.
H319	Causes serious eye irritation.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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