

# SAFETY DATA SHEET

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

**Product identifier**

**Product name:** Eastman(TM) DE Solvent

**Product No.:** EAN 902413. 01799-00, P0179901, E01799E1, E01799E2, E01799E3, E0179901, P0179910, P0179911

**Additional identification**

**Chemical name:** 2-(2-ethoxyethoxy)ethanol  
**CAS-No.:** 111-90-0

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

**Identified uses:** Solvent

**Uses advised against:** None known.

**Details of the supplier of the safety data sheet****Manufacturer / Supplier**

Eastman Chemical Company  
200 South Wilcox Drive  
Kingsport, TN 37660-5280 US  
+14232292000

Visit our website at [www.EASTMAN.com](http://www.EASTMAN.com) or email [emnmsds@eastman.com](mailto:emnmsds@eastman.com)

**Emergency telephone number:**

For emergency health, safety, and environmental information, call 1-423-229-4511 or 1-423-229-2000.

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300 or call 423-229-2000.

## SECTION 2: Hazards identification

**Hazard classification:****Physical hazards**

Flammable liquids Category 4

**OSHA Specified Hazards:** not applicable

**Warning label items including precautionary statement:**

**Signal words:** WARNING!

**Hazard Statement(s):** H227: Combustible liquid.

**Precautionary statement:**

<b>Prevention:</b>	P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. P280: Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response:</b>	P370+P378: In case of fire; Use water spray, carbon dioxide, dry chemical or alcohol foam for extinction.
<b>Storage:</b>	P403+P235: Store in a well-ventilated place. Keep cool.
<b>Disposal:</b>	P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Hazard(s) not otherwise classified (HNOC):** None known.

**SECTION 3: Composition/information on ingredients****Substances / Mixtures****General information:**

Chemical name	Concentration	Additional identification	Notes
diethylene glycol monoethyl ether	100%	CAS-No.: 111-90-0	#

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

# This substance has workplace exposure limit(s).

**SECTION 4: First aid measures****Description of first aid measures**

**Inhalation:** Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

**Eye contact:** Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

**Skin contact:** Wash with soap and water. Get medical attention if symptoms occur.

**Ingestion:** Seek medical advice.

**Most important symptoms and effects, both acute and delayed:** No known chronic or acute health risks.

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

**Hazards:** None known.

**Treatment:** Treat symptomatically.

**SECTION 5: Firefighting measures**

**General fire hazards:** Combustible liquid and vapor.

**Extinguishing media**

**Suitable extinguishing media:** Water spray. Dry chemical. Carbon Dioxide. Alcohol foam.

**Unsuitable extinguishing media:** None known.

**Special hazards arising from the substance or mixture:** Forms peroxides of unknown stability.

**Advice for firefighters**

**Special fire fighting procedures:** Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters:** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**SECTION 6: Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Wear appropriate personal protective equipment.

**Environmental precautions:** Avoid release to the environment.

**Methods and material for containment and cleaning up:** Eliminate sources of ignition. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Large Spillages: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

**Notification Procedures:** In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

**SECTION 7: Handling and storage:**

**Precautions for safe handling:** Minimize exposure to air. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Do not allow to evaporate to near dryness. Do not distill to near dryness. Addition of water or appropriate reducing materials will lessen peroxide formation.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed. Store away from heat and light.

**Specific end use(s):** Solvent

**SECTION 8: Exposure controls/personal protection**

**Control parameters**

**Occupational exposure limits**

Country specific exposure limits have not been established or are not applicable unless listed below.

Chemical name	Type	Exposure Limit values	Source
diethylene glycol monoethyl ether	TWA	25 ppm 140 mg/m3	US. AIHA Workplace Environmental Exposure Level (WEEL) Guides (2009)

**Exposure controls**

**Appropriate engineering controls:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**

**General information:** Eye bath. Washing facilities.

**Eye/face protection:** It is a good industrial hygiene practice to minimize eye contact.

**Skin protection**

**Hand protection:** It is a good industrial hygiene practice to minimize skin contact.

**Other:** No data available.

**Respiratory Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

**Hygiene measures:** Observe good industrial hygiene practices.

**Environmental Controls:** No data available.

**SECTION 9: Physical and chemical properties**

**Information on basic physical and chemical properties**

**Appearance**

**Physical State:** Liquid  
**Form:** Liquid  
**Color:** Colorless  
**Odor:** Mild

<b>Odor Threshold:</b>	1.1 ppm
<b>pH:</b>	No data available.
<b>Freezing Point:</b>	-90 °C
<b>Boiling Point:</b>	198 °C
<b>Flash Point:</b>	91 °C (Tag closed cup)
<b>Evaporation Rate:</b>	Not determined.
<b>Flammability (solid, gas):</b>	No data available.
<b>Flammability Limit - Upper (%)-:</b>	No data available.
<b>Flammability Limit - Lower (%)-:</b>	No data available.
<b>Vapor pressure:</b>	0.095 mmHg (20°C)
<b>Vapor density (air=1):</b>	4.6
<b>Specific Gravity:</b>	0.99 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in Water:</b>	Completely Soluble
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Autoignition Temperature:</b>	No data available.
<b>Decomposition Temperature:</b>	(HPDTA) No exotherm to 500°C
<b>Dynamic Viscosity:</b>	4.5 mPa.s (20 °C)
<b>Kinematic viscosity:</b>	4.54 mm <sup>2</sup> /s (20 °C)
<b>Explosive properties:</b>	No data available.
<b>Oxidizing properties:</b>	No data available.
<b>Other information</b>	
<b>Minimum ignition temperature:</b>	204 °C (ASTM D2155)

## SECTION 10: Stability and reactivity

<b>Reactivity:</b>	None known.
<b>Chemical stability:</b>	Stable
<b>Possibility of hazardous reactions:</b>	Forms peroxides of unknown stability.
<b>Conditions to avoid:</b>	Heat, sparks, flames.
<b>Incompatible materials:</b>	Strong oxidizing agents.
<b>Hazardous decomposition products:</b>	Carbon Dioxide. Carbon Monoxide.

## SECTION 11: Toxicological information

### Information on likely routes of exposure

<b>Inhalation:</b>	None known.
<b>Ingestion:</b>	None known.
<b>Skin contact:</b>	None known.

**Eye contact:** None known.

**Information on toxicological effects**

**Acute Toxicity**

**Oral**

**Product:** Oral LD-50: (Rat): 6,031 mg/kg

**Dermal**

**Product:** Dermal LD-50: (rabbit): 9,143 mg/kg

**Inhalation**

**Product:** LC50 (Rat, 8 h): > 5.24 mg/l

**Repeated dose toxicity**

**Product:** NOAEL (Dog, Oral Study): 1,000 mg/kg  
 NOAEL (Rabbit, Dermal Study): 1,000 mg/kg  
 NOAEC (rat, Inhalation study): > 1.06 mg/l

**Skin corrosion/irritation:**

**Product:** Not classified as hazardous.  
 (Rabbit, 24 h): none

**Serious eye damage/eye irritation:**

**Product:** Not classified  
 (Rabbit, 24 h): none

**Respiratory or skin sensitization:**

**Product:** Not classified  
 Human experience., (Human) - non-sensitizing

**Mutagenicity**

**In vitro**

**Product:** Salmonella typhimurium assay (Ames test), Bacterial Reverse Mutation Assay :  
 negative +/- activation

**In vivo**

**Product:** No data available.

**Specified substance(s)**

diethylene glycol monoethyl ether No data available.

**Carcinogenicity**

**Product:** Not classified

**Reproductive toxicity**

**Product:** Based on available data, the classification criteria are not met. Not classified as hazardous.

**Specific target organ toxicity - single exposure**

**Product:** Not classified

**Specific target organ toxicity - repeated exposure**

**Product:** Not classified

**Aspiration hazard**

**Product:** No data available.

**Specified substance(s)**  
 diethylene glycol monoethyl ether No data available.

**Other adverse effects:** No data available.

**SECTION 12: Ecological information**

**Toxicity**

**Acute toxicity**

**Fish**

**Product:** LC-50 (Fish, 96 h): 6,010 mg/l

**Aquatic invertebrates**

**Product:** EC-50 (daphnid, 48 h): 1,982 mg/l

**Chronic Toxicity**

**Fish**

**Product:** No data available.

**Specified substance(s)**  
 diethylene glycol monoethyl ether No data available.

**Aquatic invertebrates**

**Product:** NOEC (Ceriodaphnia, 7 d): 7.4 mg/l

**Toxicity to Aquatic Plants**

**Product:** EC-50 (Scenedesmus subspicatus, 96 h): > 100 mg/l Read-across from a similar material

**Persistence and degradability**

**Biodegradation**

**Product:** 100 % (16 d) Readily biodegradable

**Biological Oxygen Demand:**

**Product** No data available.

**Specified substance(s)**  
 diethylene glycol monoethyl ether BOD-5: 140 mg/g  
 BOD-20: 1,900 mg/g

**Chemical Oxygen Demand:**

**Product** No data available.

**Specified substance(s)**  
 diethylene glycol monoethyl ether 1,910 mg/g

**BOD/COD ratio**

**Product** No data available.

**Specified substance(s)**

diethylene glycol monoethyl ether      No data available.

**Bioaccumulative potential**

**Product:** Potential to bioaccumulate is low.

**Mobility in soil:** Expected to partition to water.

**Results of PBT and vPvB assessment:** Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria Not fulfilling vPvB (very persistent, very bioaccumulative) criteria.

**Other adverse effects:** No data available.

**SECTION 13: Disposal considerations**

**Waste treatment methods**

**General information:** No data available.

**Disposal methods:** Dispose of waste and residues in accordance with local authority requirements. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.

**SECTION 14: Transport information**

*Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.*

**DOT**

Class combustible liquid, Packing group III for quantities of 450 liters (119 gallons) or more; not regulated for smaller quantities

Possible Shipping Description(s):

NA 1993 Combustible liquid, n.o.s. (diethylene glycol monoethyl ether) combustible liquid III

**IMDG - International Maritime Dangerous Goods Code**

Class not regulated

Possible Shipping Description(s):

not regulated

**IATA**

Class not regulated

Possible Shipping Description(s):

not regulated



**SECTION 15: Regulatory information**

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

**This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.**

**WHMIS (Canada) Status:** controlled

**WHMIS (Canada) Hazard Classification:** B/3

**SARA 311-312 Hazard Classification(s):**

fire hazard

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical List**

DIETHYLENE GLYCOL MONOETHYL ETHER (GLYCOL ETHERS CATEGORY)

**OSHA:** hazardous

**TSCA (US Toxic Substances Control Act):** This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

**DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act):** This product is listed on the DSL. Any impurities present in this product are exempt from listing.

**AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme):** This product is listed on AICS or otherwise complies with NICNAS.

**MITI (Japanese Handbook of Existing and New Chemical Substances):** This product is listed in the Handbook or has been approved in Japan by new substance notification.

**ECL (Korean Toxic Substances Control Act):** This product is listed on the Korean inventory or otherwise complies with the Korean Toxic Substances Control Act.KE-10467

**Philippines Inventory (PICCS) :** This product is listed on the Philippine Inventory or otherwise complies with PICCS.

**Inventory of Existing Chemical Substances in China:** All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

**SECTION 16: Other information**

**HMIS® Hazard Ratings:** Health - 1, Flammability - 2, Chemical Reactivity - 1

*HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.*

**Revision Information:** Not relevant.

**Key literature references and sources for data:** No data available.

**Training information:** No data available.

**Issue date:** 07/24/2014

**SDS No.:**

**Disclaimer:**

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.