

Safety Data Sheet

File version: 1

Ethoxyethanol-2, 100%(v/v)

SDS Date: 29 Nov 2016

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** 100%(v/v) 2-Ethoxyethanol  
**SYNONYMS:** Ethylene glycol monoethyl ether  
Ethyl glycol  
**PRODUCT CODES:** 1008400  
1008401  
**MANUFACTURER:** Rigaku Reagents  
**ADDRESS:** 9009 New Trails Drive  
The Woodlands, TX 77381  
USA  
**PHONE:** +1 (281) 362-2300 x 502  
**EMAIL:** ReagentOrders@Rigaku.com

**CHEMICAL NAME:** 2-Ethoxyethanol  
**CHEMICAL FORMULA:** C<sub>4</sub>H<sub>10</sub>O<sub>2</sub>

**PREPARED BY:** Rigaku Reagents

**SECTION 1 NOTES:****SECTION 2: HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW:**

**OSHA HAZARDS:** Combustible liquid, target organ effect, teratogen, reproductive hazard.

**TARGET ORGANS:** Blood, central nervous system, liver, kidney

**GHS CLASSIFICATION:**

Flammable liquids (Category 3)  
Acute toxicity, Oral (Category 5)  
Acute toxicity, Inhalation (Category 3)  
Acute toxicity, Dermal (Category 5)  
Eye irritation (Category 2B)  
Reproductive toxicity (Category 1B)

**GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS**

**Signal word:** Danger

**Hazard statement(s):**

H226 Flammable liquid and vapor.  
H303 + H313 May be harmful if swallowed or in contact with skin.  
H320 Causes eye irritation.  
H331 Toxic if inhaled.  
H360 May damage fertility or the unborn child.

**Precautionary statement(s):**

P201 Obtain special instructions before use.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
P311 Call a POISON CENTER or doctor/ physician.

**POTENTIAL HEALTH EFFECTS:**

**EYES:** May cause eye irritation.

**SKIN:** May be harmful if absorbed through skin. May cause skin irritation.

**INGESTION:** May be harmful if swallowed.

**INHALATION:** May be harmful if inhaled. May cause respiratory tract irritation.

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**SECTION 2 NOTES:****SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****INGREDIENTS: 2-Ethoxyethanol****2-ETHOXYETHANOL:**

<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>
110-80-5		100%
	<u>ppm</u>	<u>mg/m3</u>
OSHA PEL-TWA:	200	740
OSHA PEL STEL :		
ACGIH TLV-TWA:	0.5	1.8
ACGIH TLV STEL:		

**SECTION 3 NOTES:****SECTION 4: FIRST AID MEASURES****EYES:** Flush eyes with water as a precaution.**SKIN:** Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.**INGESTION:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.**INHALATION:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.**SECTION 4 NOTES:****SECTION 5: FIRE-FIGHTING MEASURES****FLASH POINT:**

F: 108 °

C: 42 °

**AUTOIGNITION TEMPERATURE:**

F: No data available

C: No data available

**NFPA HAZARD CLASSIFICATION**

HEALTH: 1                      FLAMMABILITY: 2                      REACTIVITY: 0

**HMIS HAZARD CLASSIFICATION**

HEALTH: 1                      FLAMMABILITY: 2                      REACTIVITY: 0

**EXTINGUISHING MEDIA:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.**HAZARDOUS DECOMPOSITION PRODUCTS:** Hazardous decomposition products formed under fire conditions. - Carbon oxides**SECTION 5 NOTES:** Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking. Use water spray to cool unopened containers.**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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**PERSONAL PRECAUTIONS:** Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**ENVIRONMENTAL PRECAUTIONS:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

**SECTION 6 NOTES:**

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**SECTION 7: HANDLING AND STORAGE**

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**HANDLING AND STORAGE:** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

**SECTION 7 NOTES:**

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**RESPIRATORY PROTECTION:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**EYE PROTECTION:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**SKIN PROTECTION:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**WORK HYGIENIC PRACTICES:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**SECTION 8 NOTES:**

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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**APPEARANCE:** clear, colorless

**PHYSICAL STATE:** liquid, clear

**pH AS SUPPLIED:** No data available

**pH (Other):** No data available

**BOILING POINT:**

F: 275 °

C: 135 °

**FREEZING POINT:**

F: -130 °

C: -90 °

**VAPOR PRESSURE (mmHg):** 3.8

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F: 68 °

C: 20 °

**VAPOR DENSITY (AIR = 1):** 3.11

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**SPECIFIC GRAVITY (H<sub>2</sub>O = 1):** 0.93

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F: 77 °

C: 25 °

**EVAPORATION RATE:** No data available**SOLUBILITY IN WATER:** completely miscible**MOLECULAR WEIGHT:** 90.12 g mol<sup>-1</sup>**VISCOSITY:** No data available

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F: No data available

C: No data available

**SECTION 9 NOTES:**

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**SECTION 10: STABILITY AND REACTIVITY**

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**STABILITY:** Stable under recommended storage conditions.**CONDITIONS TO AVOID (STABILITY):** Heat, flames and sparks.**INCOMPATIBILITY (MATERIAL TO AVOID):** Oxidizing agents, copper**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** Hazardous decomposition products formed under fire conditions. - Carbon oxides  
Other decomposition products - no data available**SECTION 10 NOTES:**

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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**ACUTE TOXICITY:****ORAL LD50:** Rat - 2,125 mg/kg; Remarks: Behavioral: Somnolence (general depressed activity). Respiratory disorder**INHALATION LC50:** Rat - 7 h - 2000 ppm**DERMAL LD50:** Rabbit - 3,300 mg/kg**SKIN CORROSION/IRRITATION:****RABBIT:** Open irritation test**SERIOUS EYE DAMAGE/EYE IRRITATION:****RABBIT:** Mild eye irritation - 24 h**RESPIRATORY OR SKIN SENSITIZATION:** No data available.**GERM CELL MUTAGENICITY:** No data available.**CARCINOGENICITY:****IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.**REPRODUCTIVE TOXICITY:** May cause congenital malformation in the fetus. Presumed human reproductive toxicant.**SECTION 11 NOTES:**

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**SECTION 12: ECOLOGICAL INFORMATION**

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**TOXICITY:****TOXICITY TO FISH:** LC50 - Lepomis macrochirus - > 10,000 mg/l - 96 h**TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES:** EC50 - Daphnia - 1,892.52 mg/l - 48 h**PERSISTENCE AND DEGRADABILITY:** Biodegradability Result: < 5 % - Not readily biodegradable.**BIOACCUMULATIVE POTENTIAL:** Does not bioaccumulate**MOBILITY IN SOIL**

No data available

**PBT AND vPvB ASSESSMENT**

No data available

**SECTION 12 NOTES:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.**SECTION 13: DISPOSAL CONSIDERATIONS****PRODUCT:** Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.**CONTAMINATED PACKAGING:** Dispose of as unused product.**SECTION 14: TRANSPORT INFORMATION****U.S. DEPARTMENT OF TRANSPORTATION**

<b>PROPER SHIPPING NAME:</b>	Ethylene glycol monoethyl ether
<b>HAZARD CLASS:</b>	3
<b>ID NUMBER:</b>	1171
<b>PACKING GROUP:</b>	III
<b>MARINE POLLUTANT:</b>	No
<b>POISON INHALATION HAZARD:</b>	No

**WATER TRANSPORTATION**

<b>PROPER SHIPPING NAME:</b>	ETHYLENE GLYCOL MONOETHYL ETHER
<b>HAZARD CLASS:</b>	3
<b>ID NUMBER:</b>	1171
<b>PACKING GROUP:</b>	III EMS-No: F-E, S-D
<b>MARINE POLLUTANT:</b>	No

**AIR TRANSPORTATION**

<b>PROPER SHIPPING NAME:</b>	Ethylene glycol monoethyl ether
<b>HAZARD CLASS:</b>	3
<b>ID NUMBER:</b>	1171
<b>PACKING GROUP:</b>	III

**SECTION 14 NOTES:****SECTION 15: REGULATORY INFORMATION****OSHA HAZARDS:** Combustible liquid, target organ effect, teratogen, reproductive hazard**SARA 302 COMPONENTS:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.**SARA 313 COMPONENTS:**

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

	<b><u>CAS-No.</u></b>
2-Ethoxyethanol	110-80-5

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**SARA 311/312 HAZARDS:** Fire hazard, chronic health hazard**MASSACHUSETTS RIGHT TO KNOW COMPONENTS:**

	<u>CAS-No.</u>
2-Ethoxyethanol	110-80-5

**PENNSYLVANIA RIGHT TO KNOW COMPONENTS:**

	<u>CAS-No.</u>
2-Ethoxyethanol	110-80-5

**NEW JERSEY RIGHT TO KNOW COMPONENTS:**

	<u>CAS-No.</u>
2-Ethoxyethanol	110-80-5

**CALIFORNIA PROP. 65 COMPONENTS:** WARNING! This product contains a chemical known to the State of California to cause cancer.

	<u>CAS-No.</u>
2-Ethoxyethanol	110-80-5

**SECTION 15 NOTES:**

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**SECTION 16: OTHER INFORMATION**

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**DISCLAIMER:** The above information is believed to be correct but does not necessarily include all information and should be used only as a guide. The information in this document is based on our current knowledge and applies to the product with regard to appropriate safety precautions. This document does not represent any guarantee of the properties of the product. Rigaku Reagents will not be held liable for any damage resulting from handling or contact with the above product.