Material Safety Data Sheet
2-(2-Ethoxyethoxy)-Ethanol, 98+%

ACC# 00543

Section 1 - Chemical Product and Company Identification

MSDS Name: 2-(2-Ethoxyethoxy)-Ethanol, 98+%
Catalog Numbers: AC117890000, AC117890010, AC117890025, AC117890200
Synonyms: Aethyldiaethylenglycol; 3,6-Dioxa-1-Octanol; Ethylene Diglycol Monoethyl Ether.
Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
111-90-0	Diethylene glycol monoethyl ether	98.0	203-919-7

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless liquid. Flash Point: 93 deg C.
Caution! Combustible liquid and vapor. May be harmful if swallowed. May cause eye and skin irritation. May cause respiratory and digestive tract irritation. May form explosive peroxides. May cause kidney damage. This substance has caused adverse reproductive and fetal effects in animals. Hygroscopic (absorbs moisture from the air).
Target Organs: Kidneys.

Potential Health Effects

Eye: May cause eye irritation. May cause transient corneal injury. Causes redness and pain.
Skin: May cause mild skin irritation.
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause kidney damage. May be harmful if swallowed. May cause central nervous system depression.
Inhalation: May cause respiratory tract irritation. Low hazard for usual industrial handling. May cause kidney damage.
Chronic: May cause kidney damage.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.
Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.
Notes to Physician: Monitor kidney function closely.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Combustible liquid. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Containers may explode when heated.
Extinguishing Media: In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Use agent most appropriate to extinguish fire. Cool containers with flooding quantities of water until well after fire is out.
Flash Point: 93 deg C (199.40 deg F)
Autoignition Temperature: 190 deg C (374.00 deg F)
Explosion Limits, Lower:1.20 vol %
Upper: 11.60 vol %
NFPA Rating: (estimated) Health: 1; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation.

Section 7 - Handling and Storage

Handling: Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Store protected from light. If peroxide formation is suspected, do not open or move container. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
Storage: Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Diethylene glycol monoethyl ether	none listed	none listed	none listed

OSHA Vacated PELs: Diethylene glycol monoethyl ether: No OSHA Vacated PELs are listed for this chemical.
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: clear, colorless
Odor: Mild fruity characteristic odor.
pH: Not available.
Vapor Pressure: .14 mm Hg @ 20 C
Vapor Density: 4.64
Evaporation Rate:<0.01 (butyl acetate=1)
Viscosity: 3.9 cP 25.00 deg C
Boiling Point: 197 deg C @ 760.00mm Hg
Freezing/Melting Point:-76 deg C
Decomposition Temperature: Not available.
Solubility: soluble
Specific Gravity/Density:.9990
Molecular Formula:C6H14O3
Molecular Weight:134.17

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Explosive peroxides may form on concentration. Peroxides can be detonated by friction, impact, or heating.
Conditions to Avoid: Ignition sources, excess heat, strong oxidants.
Incompatibilities with Other Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 111-90-0: KK8750000
LD50/LC50:
CAS# 111-90-0:
Dermal, guinea pig: LD50 = >32 gm/kg;
Draize test, rabbit, eye: 500 mg Moderate;
Draize test, rabbit, eye: 125 mg Mild;
Draize test, rabbit, skin: 500 mg/24H Mild;
Inhalation, rat: LC50 = >5240 mg/m3/4H;
Oral, mouse: LD50 = 6600 uL/kg;
Oral, mouse: LD50 = 7250 mg/kg;
Oral, rabbit: LD50 = 3620 mg/kg;
Oral, rat: LD50 = 5500 uL/kg;
Oral, rat: LD50 = 7500 mg/kg;
Skin, rabbit: LD50 = 4200 uL/kg;
Skin, rabbit: LD50 = 8.5 ml/kg/2H;
Skin, rat: LD50 = 6 mL/kg;

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Oral, rat: LD50 = 1746-10502 mg/kg rat: LD50 = 1746-15918
Carcinogenicity:
CAS# 111-90-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: Experimental reproductive effects have been reported.
Teratogenicity: No information found
Reproductive Effects: Feeding studies with rats have shown fetal effects in the urogenital system.
Mutagenicity: No information found
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Fish: Fathead Minnow: 26.6g/L; 96H; Fish: Rainbow trout: LC50 = 13,420 mg/L; 96 Hr.; Unspecified conditionsFish: Bluegill/Sunfish: LC50 = 10,000 mg/L; 96 Hr.; Static conditions, 23 degrees CWater flea Daphnia: LC50 = 4026 mg/L; 48 Hr.; Unspecified No data available.
Environmental: Terrestrial: Will have very high mobility in soil. Volatilization is not expected to be high. Aquatic: Not expected to adsorb to suspended solids and sediment in water. Atmospheric: Will exist solely as a vapor in the ambient atmosphere. Half life 13 hours. Expected to biodegrade but not bioconcentrate.
Physical: No information found.
Other: The Koc of diethylene glycol monoethyl ether is estimated as approximately 12, using a measured log Kow of -0.54 and a regression-derived equation. According to a recommended classification scheme, this estimated Koc value suggests that diethylene glycol monoethyl ether has very high mobility in soil.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not regulated as a hazardous material	No information available.
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 111-90-0 is listed on the TSCA inventory.
Health & Safety Reporting List
CAS# 111-90-0: Effective 4/13/89, Sunset 12/19/95
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 111-90-0: fire, reactive.
Section 313
This material contains Diethylene glycol monoethyl ether (listed as Glycol ethers), 98.0%, (CAS# 111-90-0) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act:
CAS# 111-90-0 (listed as Glycol ethers) is listed as a hazardous air p ollutant (HAP).
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 111-90-0 can be found on the following state right to know lists: Pennsylvania, (listed as Glycol ethers), Minnesota.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

Not available.

Risk Phrases:

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 111-90-0: 1

Canada - DSL/NDSL

CAS# 111-90-0 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2A, D2B, B3.

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

Canadian Ingredient Disclosure List

CAS# 111-90-0 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 6/09/1999
Revision #3 Date: 10/03/2005