

SAFETY DATA SHEET

Preparation Date: 02/27/2015

Revision Date: 11/9/2018

Revision Number: G3

1. IDENTIFICATION

Product identifier

Product code: E1022
Product Name: 2-(2-ETHOXYETHOXY)ETHANOL, REAGENT

Other means of identification

Synonyms: Carbitol; Diethylene Glycol Monoethyl Ether; Diethylene Glycol Ethyl Ether; Diethylene Glycol Monoethyl Ether; Diglycol monoethyl ether; 3,6-Dioxa-1-octanol; Dioxitol; Dowanol 17; Dowanol DE; Ektasolve DE; Carbitol; Monoethyl ether of diethylene glycol; Solvolvol; Transcutol; Ethyl carbitol; Ethyl diethylene glycol; Ethyl digol

CAS #: 111-90-0
RTECS # KK8750000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300

Contact Person: Martin LaBenz (West Coast)

Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Serious eye damage/eye irritation	Category 2B
Flammable liquids	Category 4

Label elements

Warning

Hazard statements

Causes eye irritation
 Combustible liquid

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Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Causes mild skin irritation

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Wear protective gloves
Wear eye/face protection

Precautionary Statements - Response

In case of fire: Use CO₂, dry chemical, or foam to extinguish.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If skin irritation occurs: Get medical advice/attention

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
2-(2-Ethoxyethoxy)ethanol	111-90-0	100

4. FIRST AID MEASURES

First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

Eye Contact: Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms Causes eye irritation
Mild eye irritation
Mild skin irritation

Indication of any immediate medical attention and special treatment needed

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Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:

Carbon dioxide (CO₂). Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media:

Do not use a solid (straight) water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Hazardous Combustion Products:

Carbon Monoxide, Carbon Dioxide.

Specific hazards:

Combustible material. May be ignited by heat, sparks or flames. Container explosion may occur under fire conditions or when heated. Vapors may form explosive mixtures with air.

Special Protective Actions for Firefighters

Specific Methods:

Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out. Dike fire-control water for later disposal; do not scatter the material.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Hygroscopic. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Store in a segregated and approved area.

Incompatible Materials:

Acids
Organic materials

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
2-(2-Ethoxyethoxy)ethanol	111-90-0	None	None	None	25 ppm TWA

Canada

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Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
2-(2-Ethoxyethoxy)ethanol	111-90-0	None	None	None	None

Australia and Mexico

Components	CAS-No.	Australia	Mexico
2-(2-Ethoxyethoxy)ethanol	111-90-0	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Goggles

Skin and body protection: Chemical resistant apron
Long sleeved clothing
Gloves

Respiratory protection: Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Liquid

Appearance:

No information available.

Color:

Colorless. Clear.

Odor:

Fruity. Characteristic. Pleasant. Slight.

Taste

Bitter.

Formula:

C6H14O3

Molecular/Formula weight (g/mole):

134.18

Flammability:

No information available

Flashpoint (°C/°F):

91°-96°C/195.8°-204.8°F

Flash Point Tested according to:

Closed cup

Autoignition Temperature (°C/°F):

204°-218°C/399.2°-424.4°F

Lower Explosion Limit (%):

1.2

Upper Explosion Limit (%):

23.5

Melting point/range(°C/°F):

-10°C/14°F

Decomposition temperature(°C/°F):

No information available

Boiling point/range(°C/°F):

196°-197°C/384.8°-386.6°F

Bulk density:

No information available

Density (g/cm3):

No information available

Specific gravity:

0.99

pH:

No information available

Vapor pressure @ 20°C (kPa):

1.76 kPa @ 25°C

Evaporation rate:

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No information available

Vapor density:
4.62

VOC content (g/L):
No information available

Odor threshold (ppm):
No information available

**Partition coefficient
(n-octanol/water):**
-0.54 to -0.8

Viscosity:
No information available

Miscibility:
Miscible with Benzene
Miscible with Chloroform
Miscible with Ethanol
Miscible with Pyridine

Solubility:
Soluble in Acetone
Soluble in cold water
Soluble in diethyl ether

10. STABILITY AND REACTIVITY

Reactivity

Reactive with acids
Reactive with oxidizing agents

Chemical stability

Stability: Hygroscopic. Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials. Exposure to moisture.

Incompatible Materials: Acids
Organic materials

Hazardous decomposition products: No information available.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Eyes. Skin.

Acute Toxicity

Component Information

2-(2-Ethoxyethoxy)ethanol

CAS-No. | 111-90-0

LD50/oral/rat = 10502 mg/kg Oral LD50 Rat

LD50/oral/mouse = 6600 µL/kg Oral LD50 Mouse

LD50/dermal/rabbit = 4200 µL/kg Dermal LD50 Rabbit; 9143 mg/kg

LD50/dermal/rat = 6 mL/kg Dermal LD50 Rat

LC50/inhalation/rat = 5240 mg/m³ Inhalation LC50 Rat 4 h

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LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = 10502 mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = 6600 µL/kg

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = 4200 µL/kg

LD50/dermal/rat
VALUE -Acute Tox Dermal = 6 ml/kg

LC50/inhalation/rat
VALUE-Vapor = 5240 mg/m³ (4-hr)
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Mild skin irritation. It may be absorbed through the skin. If absorbed through the skin it may affect behavior/central nervous system and cause central nervous system effects.

Eye Contact: Causes eye irritation. Mild eye irritation.

Inhalation May cause irritation of respiratory tract. It may affect the liver.

Ingestion May cause digestive (gastrointestinal) tract irritation. May affect brain, behavior/central nervous system (ataxia, somnolence, general anesthetic, excitation, central nervous system inhibition, motor coordinator disorder.

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Chronic exposure may affect the liver, kidneys, and blood.

Sensitization: No information available.

Mutagenic Effects: Experiments with bacteria and/or yeast have shown mutagenic effects
May affect genetic material

Carcinogenic effects: Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic	Australia - Prohibited Carcinogenic
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						Substances	Substances
2-(2-Ethoxyethoxy)ethanol	111-90-0	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: May cause adverse reproductive effects based on animal data

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target Organs: Kidneys. Liver. Blood.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

2-(2-Ethoxyethoxy)ethanol - 111-90-0

Freshwater Fish Species Data: 10000 mg/L LC50 Lepomis macrochirus 96 h static 1 19100 - 23900 mg/L LC50 Lepomis macrochirus 96 h flow-through 1 11400 - 15700 mg/L LC50 Oncorhynchus mykiss 96 h flow-through 1 11600 - 16700 mg/L LC50 Pimephales promelas 96 h flow-through 1 13400 mg/L LC50 Salmo gairdneri 96 h flow-through 1

Water Flea Data: 3940 - 4670 mg/L EC50 Daphnia magna 48 h

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
2-(2-Ethoxyethoxy)ethanol	111-90-0	None	None	None	None

14. TRANSPORT INFORMATION

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DOT

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Class	No information available
Packing group:	No information available
Emergency Response Guide Number	No information available
Marine Pollutant	No data available
DOT RQ (lbs):	No information available
Special Provisions	No Information available
Symbol(s):	No information available
Description:	No information available

TDG (Canada)

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available
Marine Pollutant	No Information available
Description:	No information available

ADR

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Packing Group:	No information available
Subsidiary Risk:	No information available

IMO / IMDG

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available
Marine Pollutant	No information available

RID

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available

ICAO

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available

IATA

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available

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Subsidiary Risk: No information available
Packing Group: No information available
ERG Code: No information available
Special Provisions No information available

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
2-(2-Ethoxyethoxy)ethanol	111-90-0	PresentACTIVE	Present KE-10467	Present	Present (7)-97,(2)-422	Present	Present	Present 203-919-7

U.S. Regulations

2-(2-Ethoxyethoxy)ethanol

Minnesota - Hazardous Substance List: Present

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
2-(2-Ethoxyethoxy)ethanol	111-90-0	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
2-(2-Ethoxyethoxy)ethanol	111-90-0	None	None	None	None	None

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
2-(2-Ethoxyethoxy)ethanol	111-90-0	Not Applicable	Not Applicable

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component
2-(2-Ethoxyethoxy)ethanol
111-90-0 (100)

WHMIS 2015 Hazard Classification
Flammable liquids - Category 4: H227 Combustible liquid.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous

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Products Regulation) and the SDS contains all of the information required by the HPR

Components	WHMIS Ingredient Disclosure List -
2-(2-Ethoxyethoxy)ethanol	1 %

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
2-(2-Ethoxyethoxy)ethanol	111-90-0	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
2-(2-Ethoxyethoxy)ethanol	111-90-0	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
2-(2-Ethoxyethoxy)ethanol	111-90-0	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
2-(2-Ethoxyethoxy)ethanol	111-90-0	No information

EU - CLP (1272/2008)

R-phrase(s)

R36 - Irritating to eyes.

S-phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S39 - Wear eye/face protection.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
2-(2-Ethoxyethoxy)ethanol	111-90-0		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xi - Irritant.

16. OTHER INFORMATION

Preparation Date: 02/27/2015
 Revision Date: 11/9/2018
 Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular

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End of Safety Data Sheet