

Ethyl Ether

MSDS # 276.00

Section 1: Product and Company Identification**Ethyl Ether****Synonyms/General Names:** Diethyl Ether, Ether, Ethyl Oxide**Product Use:** For educational use only**Manufacturer:** Columbus Chemical Industries, Inc., Columbus, WI 53925.**24 Hour Emergency Information Telephone Numbers****CHEMTREC (USA): 800-424-9300****CANUTEC (Canada): 613-424-6666**

Scholar Chemistry; 5100 W. Henrietta Rd, Rochester, NY 14586; (866) 260-0501; www.Scholarchemistry.com

Section 2: Hazards Identification*Clear, colorless liquid, pungent sweet odor.***DANGER!** Severe fire and explosion risk and inhalation hazard.

Flammable liquid, keep away from all ignition sources.

Target organs: Central nervous system.

HMIS (0 to 4)

Health	2
Fire Hazard	4
Reactivity	2

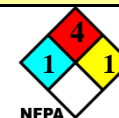
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Section 3: Composition / Information on Ingredients

Ethyl Ether (60-29-7), >99%

Section 4: First Aid Measures*Always seek professional medical attention after first aid measures are provided.***Eyes:** Immediately flush eyes with excess water for 15 minutes, lifting lower and upper eyelids occasionally.**Skin:** Immediately flush skin with excess water for 15 minutes while removing contaminated clothing.**Ingestion:** Call Poison Control immediately. **Aspiration hazard.** Rinse mouth with cold water. Give victim 1-2 tbsp of activated charcoal mixed with 8 oz water.**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration.**Section 5: Fire Fighting Measures**

Class IA Flammable Liquid. When heated to decomposition, emits acrid fumes

Protective equipment and precautions for firefighters: Use foam or dry chemical to extinguish fire. Water may be ineffective. Firefighters should wear full fire fighting turn-out gear and respiratory protection (SCBA). Cool container with water spray. Liquid floats on water surface, vapors are heavier than air and may travel to a source of ignition and spread fire. Material is sensitive to mechanical impact if older than 6 months and to static discharge.**Section 6: Accidental Release Measures**

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all ignition sources and ventilate area. Contain spill with sand or absorbent material and place material in a sealed bag or container for disposal. Wash spill area after pickup is complete. See Section 13 for disposal information.

Section 7: Handling and Storage**Red****Handling:** Use with adequate ventilation and do not breathe dust or vapor. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling. Peroxide formation may occur in containers that have been opened and remain in storage for more than 12 months. Peroxides may be detonated by friction, impact or heating. Never distill to dryness.**Storage:** Store in Flammable Area [Red Storage] with other flammable materials and away from any strong oxidizers. Store in a dedicated flammables cabinet. Store in a cool, dry, well-ventilated, locked store room away from incompatible materials.**Section 8: Exposure Controls / Personal Protection**Use ventilation to keep airborne concentrations below exposure limits. Have approved eyewash facility, safety shower, and fire extinguishers readily available. Wear chemical splash goggles and chemical resistant clothing such as gloves and aprons. Wash hands thoroughly after handling material and before eating or drinking. Use NIOSH-approved respirator with an acid/organic cartridge. Exposure guidelines: Ethyl Ether: OSHA PEL: 1200 mg/m³ and ACGIH TLV: 400 ppm, STEL: 500 ppm.

Section 9: Physical and Chemical Properties

Molecular formula	(CH ₃ CH ₂) ₂ O.	Appearance	Clear, colorless liquid.
Molecular weight	74.12.	Odor	Mild.
Specific Gravity	0.708 g/mL @ 20°C.	Odor Threshold	N/A.
Vapor Density (air=1)	2.56.	Solubility	Slightly soluble in water.
Melting Point	-116°C.	Evaporation rate	37.5 (<i>Butyl acetate = 1.</i>)
Boiling Point/Range	35°C.	Partition Coefficient	0.82 (<i>log P_{ow}.</i>)
Vapor Pressure (20°C)	442 mm Hg.	pH	N/A.
Flash Point:	-45°C (-49°F) CC.	UEL	1.9%.
Autoignition Temp.:	160°C (320°F).	LEL	36 %.

N/A = Not available or applicable

Section 10: Stability and Reactivity

Stability: Stable under normal conditions of use. Once opened, stability will degrade during storage. Avoid storing for longer than 12 months. Avoid heat and ignition sources.

Incompatibility: Oxidizing agents

Shelf life: Poor shelf life, protect from light and heat.

Section 11: Toxicology Information

Acute Symptoms/Signs of exposure: **Eyes:** Stinging pain, watering of eyes, inflammation of eyelids and conjunctivitis. **Skin:** Insensitivity to pain, feel of coolness or cold, skin looks white and feels hard and cold. **Ingestion:** Breath has sweet, organic odor, metal confusion, drowsiness, nausea, vomiting and headache. **Inhalation:** Rapid irregular breathing, headache, fatigue, mental confusion, nausea and vomiting, giddiness and poor judgment, convulsions and death.

Chronic Effects: Repeated/prolonged skin contact may cause dryness or rashes.

Sensitization: none expected

*Ethyl Ether: LD50 [oral, rat]; 1215 mg/kg; LC50 [mouse]; 186 mg/l (90 minutes); LD50 Dermal [rabbit]; 14.2g/kg
Material has not been found to be a carcinogen nor produce genetic, reproductive, or developmental effects.*

Section 12: Ecological Information

Ecotoxicity (aquatic and terrestrial): LC50 – 2560mg/l – 96h – Pimephales promelas.

Section 13: Disposal Considerations

Check with all applicable local, regional, and national laws and regulations. Local regulations may be more stringent than regional or national regulations. Use a licensed chemical waste disposal firm for proper disposal.

Section 14: Transport Information

DOT Shipping Name:	Diethyl Ether.	Canada TDG:	Diethyl Ether.
DOT Hazard Class:	3, pg I.	Hazard Class:	3, pg I.
Identification Number:	UN1155.	UN Number:	UN1155.

Section 15: Regulatory Information

EINECS: Listed (200-467-2).

WHMIS Canada: CLASS B-1: Flammable liquid.

TSCA: All components are listed or are exempt.

California Proposition 65: Not listed.

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

Section 16: Other Information

Current Issue Date: December 21, 2011

Disclaimer: Scholar Chemistry and Columbus Chemical Industries, Inc., ("S&C") believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because S&C has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. S&C makes no warranty, expressed or implied, including (without limitation) warranties with respect to the completeness or continuing accuracy of the information contained herein or with respect to fitness for any particular use.