FLINN SCIENTIFIC, INC.
Material Safety Data Sheet (MSDS)

MSDS #: 324.00

Revision Date: November 21, 2012

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Ethyl Ether

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

SECTION 2 — COMPOSITION, INFORMATION ON INGREDIENTS

Ethyl ether
Synonym: Diethyl ether

CAS#: 60-29-7

SECTION 3 — HAZARDS IDENTIFICATION

Colorless volatile liquid. Sweet, pungent odor.
Serious depressant by inhalation and skin absorption.
Slightly toxic by ingestion and inhalation; irritant; avoid all body tissue contact. May form explosive peroxides on concentration and aging.

FLINN AT-A-GLANCE

Health-2
Flammability-3
Reactivity-1
Exposure-1
Storage-3

0 is low hazard, 3 is high hazard

SECTION 4 — FIRST AID MEASURES

Call a physician and seek medical attention for further treatment, observation, and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped, give artificial respiration immediately.
Eye or External: Immediately flush with fresh water for at least 15 minutes.
Internal: Rinse mouth. Give large quantities of water for dilution. Call a physician or poison control at once.

SECTION 5 — FIRE FIGHTING MEASURES

Class 1A flammable liquid.
Flash point: -45 °C Lower: 1.8% Upper: 48% Autoignition Temperature: 160 °C
Severely flammable liquid; old ether may develop explosive peroxides.
Fire Fighting Instructions: Use a triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

NFPA CODE

H-1
F-4
R-1

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from the area. Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #4. Store with ethers, ketones, halogenated hydrocarbons, and ethylene oxide. Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor Can. Use and dispense in a hood.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits. Always wear a NIOSH-approved respirator with proper cartridges or a positive pressure, air-supplied respirator when handling this material in emergency situations (spill or fire).
Exposure guidelines: PEL 400 ppm, STEL 500 ppm (OSHA, ACGIH)

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SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid with a sweet, pungent odor; volatile.
Solubility: Soluble in alcohol and chloroform. Slightly soluble in water.
Formula: $C_2H_5OC_2H_5$
Formula weight: 74.14

Boiling point: 34.5 ^oC
Melting point: -116 ^oC
Refractive index: 1.3526
Specific gravity: 0.7138

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with oxidizers and heat.
Shelf life: Poor, forms explosive peroxides upon aging.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, irritant, coughing, chest pains, difficulty in breathing, nausea, headache, vomiting.
Chronic effects: Possible mutagen.
Target organs: Central nervous system.

ORL-RAT LD_{50}: 1215 mg/kg
IHL-RAT LC_{50}: 73,000 ppm/2H
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #15 is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Diethyl ether
Hazard class: 3, Flammable Liquid
UN number: UN1155
N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-467-2), RCRA code U117.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

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