MALLINCKRODT

Material Safety Data Sheet

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Mallinckrodt, Inc. Science Products Division, P.O. Box M Paris, KY 40361

Emergency Telephone Number: 314-982-5000

ETHYL ETHER (Stabilized with ethyl alcohol)

PRODUCT IDENTIFICATION:

Synonyms: Anesthesia ether; ethyl oxide; diethyl ether

Formula CAS No.: 60-29-7

Molecular Weight: 74.12

Chemical Formula: $C_2H_5OC_2H_5$

Hazardous Ingredients: CAS# 64-17-5 Ethyl Alcohol

PRECAUTIONARY MEASURES

DANGER! EXTREMELY FLAMMABLE. HARMFUL IF SWALLOWED OR INHALED.
CAUSES ANESTHETIC EFFECTS.

May form explosive peroxides.
Keep away from heat, sparks and flame.
Keep container closed.
Use with adequate ventilation.
Avoid breathing vapor.
Wash thoroughly after handling.
Store At A Temperture Not Exceeding 30°C (86°F).
DO NOT OPEN Unless Contents Are At Room Temperature (72°F) or Below For At Least 24 Hours.

EMERGENCY/FIRST AID

If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In all cases call a physician.
SEE SECTION 5.

DOT Hazard Class: Flammable Liquid

SECTION 1 Physical Data

Appearance: Colorless liquid.

Odor: Sweet, ethereal odor.

Solubility: 7.5 gm/100 gm water @ 20°C.

Boiling Point: 35°C (95°F)

Melting Point: -123°C (-190°F)

Specific Gravity (water=1): 0.71

Vapor Density (Air=1): 2.6

Vapor Pressure (mm Hg): 422 @ 20°C (68°F)

Evaporation Rate: (BuAc=1): 37.5

SECTION 2 Fire and Explosion Information

Fire:
Dangerous highly flammable liquid.
Flash point: -45°C (-49°F) (closed cup).
Auto ignition temperature: 160°C (320°F).
Flammable limits in air, % by volume:
lel = 1.9; uel = 36.0.

Explosion:
Above flash point, vapor-air mixtures are explosive within flammable limits noted above. May form explosive peroxides on long standing or after exposure to air or light.

Fire Extinguishing Media:
Dry chemical, foam or carbon dioxide. Treat as a flammable gas in a fire situation. Water spray may be used to keep fire exposed containers cool.

Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. This highly flammable liquid must be kept from sparks, open flame, hot surfaces, and all sources of heat and ignition. Vapors can flow along surfaces to distant ignition source and flash back.

SECTION 3 Reactivity Data

Stability:
Stable under ordinary conditions of use and storage. Heat, light, and long standing contribute to instability. Reacts with air to form explosive peroxides.

Hazardous Decomposition Products:
Toxic gases and vapors such as carbon monoxide may be released in a fire.

Hazardous Polymerization:
Will not occur.

Incompatibilities:
Can react dangerously with acetyl peroxide, liquid air, bromoazide, chlorine, and strong oxidizers such as nitrates.

SECTION 4 Leak/Spill Disposal Information

Remove all sources of ignition; ventilate area of leak or spill; wear full protective equipment and clothing and NIOSH approved self-contained breathing apparatus, full facepiece operated in the pressure demand or other positive pressure mode. Contain and recover liquid when possible. Absorb with vermiculite, dry sand, earth, or similar material. Scoop up with non-sparking tools and place in a closed container, and dispose in a RCRA approved facility. Alternatively, spills may be collected as RCRA hazardous waste and dissolved in an alcohol of greater molecular weight than butyl alcohol, then atomized in a suitable combustion chamber. This substance should not be flushed to sewer because of the possibility of an explosion.

Ensure compliance with local, state and federal regulations.

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