ORT ATKINSON, WI 53538-0901
ODESTO, CA 95356-831
800-558-9595

CHEMTREC 800-424-9300

HAZARD RATING

Health Hazard	2
Flammability	4
Reactivity	2

IMPORTANT
MATERIAL SAFETY DATA SHEET

READ CAREFULLY BEFORE USING CHEMICAL
OSHA requires that this form be kept on file.

Product No. KM 172 M

Product Name ETHER ANHYDROUS

SECTION I — NAME

Chemical Synonyms	Diethyl Ether
Formula	$(C_2H_5)_2O$
C.A.S. No.	60-29-7

SECTION II — HAZARDOUS INGREDIENTS

Principal Hazardous Component(s)	%	P.E.L.	TLV Units
*Ethyl Ether C.A.S. # (60-29-7)	>99%	400 ppm	400 ppm
*Ethyl Alcohol C.A.S. # (64-17-5)	0.05	400 ppm	400 ppm

★ chemical subject to the reporting requirements of SARA Title III.

SECTION III — PHYSICAL DATA

Melting Point (°F)	-123°C (-190°F)	Specific Gravity (H_2O=1)	0.71
Boiling Point (°F)	35°C (95°F)	Percent Volatile by Volume (%)	
Vapor Pressure (mm Hg)	422 @ 20°C (68°F)	Evaporation Rate (Bu Ac =1)	37.5
Vapor Density (Air=1)	2.6		
Solubility in Water	7.5 gm/100gm water @ 20°C		
Appearance & Odor	Colorless liquid with sweet, etheral odor.		

SECTION IV — FIRE AND EXPLOSION DATA

Flash Point (Method Used)	-45°C (-49°F) (closed cup)	Flammable Limits in Air % by Volume -------	Lower	Upper
			1.9	36.0
Extinguisher Media	Dry chemical, foam or carbon dioxide.			

Special Firefighting Procedures

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. 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.

Unusual Fire and Explosion Hazards

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 late and ignition. Vapors can flow along surfaces to distant ignition source and flash back.

DEC 13 1995

D.O.T.	Diethyl ether, 3, UN1155, PGI

Approved by U.S. Department of Labor ... OSHA 20

Threshold Limit Value
400 ppm (TWA) 500 (STEL)

91166

Effects of Overexposure

Inhalation: General anesthesia by inhalation can occur. Continued exposure may lead to respiratory fa or death . Early symptoms include irritation of nose and throat, vomiting, and irregular respiration, follc by dizziness, drowsiness, and unconsciousness. Ingestion: Ingestion of 1 or 2 ounces may be fatal. S contact: Can cause dermatitis on prolonged exposure. Chronic Exposure: Prolonged exposures may result in headache, drowsiness, excitation, and psychic disturbances.

Emergency and First Aid Procedures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician. Ingestion: If swallowed, induce vomiting immediately by giving two glasses water and sticking finger down throat. Never give anything by mouth to an unconscious person. Call physician immediately. Skin contact: Remove any contaminated clothing. Wash skin with plenty of w for at least 15 minutes. If irritation develops, get medical attention. Eye contact: Wash eyes with plent water for at least 15 minutes. Call a physician.

SECTION VI — REACTIVITY DATA

Stability: Stable ☒ Unstable ☐	Conditions to Avoid: Heat, light, and long standing contribute to instability. Reacts with air to f explosive peroxides.
Incompatibility (Materials to Avoid)	Can react dangerously with acetyl chloride, liquid air, bromoazide, chlori and strong oxidizers such as nitrates.
Hazardous Decomposition Products	Toxic gases and vapors such as carbon monoxide may be released in a fire.
Hazardous Polymerization: May Occur ☐ Will Not Occur ☒	Conditions to Avoid: None Known

SECTION VII — SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled

Remove all sources of ignition; ventilate area of leak or spill.

Waste Disposal Method

Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size qua

Spills may be collected as RCRA hazardous waste and dissolved in an alcohol of greater molecular weight than butyl alcohol, then ato in a suitable combustion chamber. This substance should not be flushed to sewer because of the possibility of an explosion.

SECTION VIII — SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type)	Respirator			
Ventilation	Local Exhaust	-------	Special	Explosion Proof Exhau
	Mechanical (General)	-------	Other	-------
Protective Gloves	Latex	Eye Protection	Chemical Safety Go	
Other Protective Equipment	Clean body-covering, non static producing clothing.			

SECTION IX — SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing

Keep container tightly closed when not in use.

Outside or detached storage is preferred. Inside storage should be in a standard flammable liquids storage room or cabinet. Separa oxidizing materials. Storage and use areas should be No Smoking areas. Isolate from other combustible material. Protect from dire sunlight.

Other Precautions

Read label on container before using. Do not wear contact lenses when working with chemicals.

Protect against static electricity and lightning for large quantity storage rooms, protect with automatic sprinkler systems and total floo carbon dioxide systems. DO NOT OPEN unless contents are at room temperature (72°F) or below.

Approved by	Steven C. Quandt	Effective Date	11/11/94	For laboratory use only. Not for d household use. Keep out of react