



MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards

1. PRODUCT IDENTIFICATION

CHEMICAL NAME; CLASS: ISOPROPYL ETHER; 3
Document Number: 10820-3

PRODUCT USE: For general analytical/synthetic chemical uses.

SUPPLIER/MANUFACTURER'S NAME: MESA Specialty Gases & Equipment
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DATE OF PREPARATION: May 1, 1998

Section 2 – Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
ISOPROPYL ETHER	108-20-3	No
Formula	C ₆ H ₁₄ O	
Synonyms	Dilsopropyl oxide, Ether, isopropyl, Ether isopropylique (French), 2-Isopropoxypropane, Isopropyl ether (ACGIH:OSHA), Izopropylowy eter (Polish)	

Section 3 - Hazards Identification

Emergency Overview

Flammable (USA) Highly Flammable (EU). Irritant.
May form explosive peroxides. Irritating to eyes, respiratory system, and skin.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure

In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

Explosion Hazards

Vapor may travel considerable distance to source of ignition and flash back.
Container explosion may occur under fire conditions.

Explosion Limits: Lower: 1 % Upper: 21 %
Autoignition Temp: 442 °C Flammability: N/A

Extinguishing Media Suitable

Carbon dioxide, dry chemical powder, or appropriate foam. Water spray.

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s)

Extremely flammable. Vapor may travel considerable distance to source of ignition and flash back. Emits toxic fumes under fire conditions.

Exposure Hazard(s): Material Irritant.

Section 6 - Accidental Release Measures

Procedure to be Followed in case of Leak or Spill Evacuate area. Shut off all sources of ignition.

Procedure(s) of Personal Precaution(s)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for cleaning Up

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Section 7- Handling and Storage

Handling

User Exposure

Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

Storage

Suitable

keep tightly closed. Store in a cool dry place. Keep away from heat, sparks, and open flame.

Unsuitable

Forms explosive peroxides on prolonged storage

Section 8- Exposure Controls / PPE

Engineering controls

Safety shower and eye bath. Use only in a chemical fume hood.

Personal Protective Equipment Other

Wear appropriate NIOSH/MSHA-approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

General Hygiene Measures

Wash thoroughly after handling. Remove and wash contaminated clothing promptly.

Section 8- Exposure Controls / PPE (Continued)

Exposure Limits, RTECS

<u>Country</u>	<u>Source</u>	<u>Type</u>	<u>Value</u>	<u>Remarks</u>
USA	ACGIH	STEL	1300 MG/M3 (310 PPM)	

USA	ACGIH	TWA	1040 MG/M3 (250 PPM)
USA	MSHA Standard-air	TWA	
USA	OSHA.	PEL	
			250 PPM (1050 MG/M3)
			8H TWA 500 PPM (2100 MG/M3)
New Zealand	OEL		
USA	NIOSH	TWA	500 PPM

check ACGIH TLV

Section 9- Physical/Chemical Properties

Appearance

Color	Form
Colorless	Clear Liquid

Molecular Weight: 102.18 AMU

<u>Property</u>	<u>Value</u>	<u>At Temperature or Pressure</u>
pH	N/A	
BPIBP Range	67 - 69 °C	
MP/MP Range	-85 °C	
Freezing Point	N/A	
Vapor Pressure	120 mmHg	20 °C
Vapor Density	3.5 g/l	
Saturated Vapor conc.	N/A	
SG/Density	0.724 g/cm3	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
Voc content	N/A	
Water content	N/A	
Solvent content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Partition coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point ~F	-84.2 °F	
Flash Point ~c	-29 °C	
Explosion Limits	Lower: 1 % Upper: 21 %	100 °C
Autoignition Temp	442 °C	
Refractive Index	1.368	
Solubility	N/A	

Section 10 - Stability and Reactivity

Stability

Materials to Avoid: Strong oxidizing agents.

Hazardous Decomposition Products Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

Section 11 – Toxicological Information

Route of Exposure

Skin contact

Causes skin irritation.

Multiple Routes

May be harmful by inhalation, ingestion, or skin absorption. Vapor or mist is irritating to the eyes, mucous membranes, and upper respiratory tract.

Signs and Symptoms of Exposure

Exposure can cause: Nausea, headache, and vomiting. Narcotic effect.

RTECS Number: TZ5425000

Toxicity Data

Oral - Rat: 8,470 mg/kg (LD50)

Inhalation - Rat: 162,000 mg/m³ (LC50)

Remarks: Behavioral:Somnolence (general depressed activity).

Behavioral:Change in motor activity (specific assay).

Behavioral:Muscle contraction or spasticity.

Inhalation - Mouse: 131,000 mg/m³ (LC50)

Remarks: Behavioral:General anesthetic.

Behavioral:Change in motor activity (specific assay).

Behavioral:Muscle contraction or spasticity.

Intraperitoneal - Mouse: 812 MG/KG (LD50)

Inhalation - Rabbit: 121,000 mg/m³ (LC50)

Remarks: Behavioral:Somnolence (general depressed activity).

Behavioral:Change in motor activity (specific assay).

Behavioral:Muscle contraction or spasticity.

Skin - Rabbit: 20 ML/KG (LD50)

Oral - Mammal: 6,000 mg/kg (LD50)

Inhalation - Mammal: 130,000 mg/m³ (LC50)

Irritation Data

Skin - Rabbit: 363 mg

Remarks: Open irritation test

Chronic Exposure - Reproductive Hazard

Species

Dose

Route of Application

Exposure Time

Rat

3095 PPM/6H

Inhalation

(6-1 SD PREG)

Result: Maternal Effects: Other effects. Specific Developmental Abnormalities: Musculoskeletal system.

Section 12 - Ecological Information

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.

Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Diisopropyl ether

UN#: 1159

Class: 3

Packing Group: Packing Group II

PIH: Not PIH

IATA

Proper Shipping Name: Diisopropyl ether

IATA Number: 1159

Hazard Class: 3

Packing Group: II

Section 15 - Regulatory Information

US Classification and Label Text

Indication of Danger

Flammable (USA) Highly Flammable (EU). Irritant.

Risk Statements

May form explosive peroxides. Irritating to eyes, respiratory system, and skin.

Safety Statements

Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection.

United States Regulatory Information SARA 313 Listed: No

TSCA Inventory Item: Yes

Section 16 - Other Information

Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. MESA Specialty Gases & Equipment, shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 1999 MESA Specialty Gases & Equipment, License granted to make unlimited paper copies for internal use only.