

## ISOPROPYL ETHER MSDS

PAGE 1 OF 5

# 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

ADDRESS: 3619 Pendleton Avenue, Suite C

Santa Ana, CA 92704

BUSINESS PHONE: 1-714-434-7102

EMERGENCY PHONE: INFOTRAC: 1-800-535-5053

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<sub>6</sub>H<sub>14</sub>O

Synonyms Diisopropyl oxide, Ether, isopropyl, Ether isopropylique (French), 2-Isopropoxypropane, Isopropyl ether (ACGIH:OSHA), Izopropyłowy 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.

## ISOPROPYL ETHER MSDS

PAGE 2 OF 5

## 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**

Countrv Source Type Value Remarks

USA ACGIH STEL 1300 MG/M3 (310 PPM)

### **ISOPROPYL ETHER MSDS**

#### **PAGE 3 OF 5**

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 check ACGIH TLV

USA NIOSH TWA 500 PPM

### **Section 9- Physical/Chemical Properties**

#### **Appearance**

##### **Color Form**

Colorless Clear Liquid

**Molecular Weight:** 102.18 AMU

##### **Property Value At Temperature or Pressure**

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 % 100 °C

Upper: 21 %

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.

### **ISOPROPYL ETHER MSDS**

## 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/m<sup>3</sup> (LC50)

Remarks: Behavioral:Somnolence (general depressed activity).

Behavioral:Change in motor activity (specific assay).

Behavioral:Muscle contraction or spasticity.

Inhalation - Mouse: 131,000 mg/m<sup>3</sup> (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/m<sup>3</sup> (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/m<sup>3</sup> (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.

### ISOPROPYL ETHER MSDS

## 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

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