

Safety Data Sheet

Document code: SDS-DIETHYL ETHER	Name of substance or mixture DIETHYL ETHER		
	Version: 1.0	Date of approval: 30-May-25	Review date: NA
	It replaces: None		

SECTION 1. Identification

1.1. GHS product identifier:

Product form: Liquid
Product name: Diethyl Ether
CAS No: 60-29-7

1.2. Other means of identification:

Ether, ethyl ether, ethyl oxide, diethyl oxide, ethyl ether inhibited.

1.3. Recommended use of the chemical and restrictions on use:

Solvent, chemical intermediate, starting fluid.

1.4. Supplier's details:

Industrias Monfel, S.A. de C.V.
Avenida Promoción No. 345
Zona Industrial, 1a. Sección
San Luís Potosí, S.L.P.
(444)-824-5622

1.5. Emergency phone number:

Emergency number: SETIQ 800-00-214-00

SECTION 2. Hazard identification

2.1. Classification of the substance or mixture:

Hazard class	Hazard category
Flammable liquids	1
Acute toxicity by ingestion	4
STOT SE	3

2.2. GHS label elements, including precautionary statements:

Hazard Pictograms



Signal word

Danger

Hazard statements:

H224 Extremely flammable liquid and vapor.
H302 Harmful if swallowed.

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Precautionary statements:

P210	Keep away from heat, sparks, open flames, hot surfaces. - No smoking.
P241	Use explosion-proof electrical, lighting, ventilating equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash hands, forearms and exposed areas thoroughly after handling.
P280	Wear eye protection, face protection, protective clothing, protective gloves.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	If inhaled: Remove the person to fresh air and keep at rest in a position comfortable for breathing.
P370+P378	In case of fire: Use appropriate media to extinguish.
P403+P233+P235	Store in a well-ventilated place. Keep the container tightly closed. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other hazards which do not result in classification:

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

SECTION 3. Composition/information on ingredients

3.1. Substances:

Chemical identity of the substance: Diethyl Ether.

Common name(s) synonym(s) of the substance: Ether, ethyl ether, ethyl oxide, diethyl oxide, ethyl ether inhibited.

CAS number: 60-29-7

Impurities and stabilizing additives which are themselves classified and which contribute to the classification of the substance:

Name	Product identifier	% (w/w)	Classification GHS	
Diethyl Ether	60-29-7	96-99	Flammable liquids	1
			Acute toxicity by ingestion	4
			STOT SE	3
Ethyl Alcohol	64-17-5	1-4	Flammable liquids	2
			Eye Irritation	2A

3.2. Mixtures:

Not applicable.

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SECTION 4. First-aid measures

4.1. Description of necessary first-aid measures:

- Inhalation:** Immediately leave the contaminated area; take a deep breath in the fresh air. If symptoms appear (such as wheezing, coughing, shortness of breath, or burning in your mouth, throat, or chest), call a doctor and be prepared to transport the victim to a hospital.
- Skin contact:** Immediately rinse the affected skin with water for at least 20 minutes while removing and isolated all contaminated clothing. Gently wash all affected areas of the skin with soap and water. If symptoms such as redness or irritation occur, call a doctor immediately.
- Eye contact:** First check if the victim has contact lenses and remove them if they are present. Rinse the victim's eyes with normal water or saline solution for 20 to 30 minutes by occasionally lifting the lower and upper eyelids, while simultaneously calling a hospital or poison control center. Do not put any ointment, oil, or medicine in the victim's eyes without specific instructions from a doctor. Immediately transport the victim after rinsing his eyes to a hospital.
- Ingestion:** Do not induce vomiting. If the victim is conscious and does not convulse, give 1 or 2 glasses of water to dilute the chemical and call your doctor immediately. If the victim is convulsed or unconscious, do not administer anything through the mouth, make sure the victim's airway is open and place the victim on its side with the head lower than the body.

4.2. Most important symptoms/effects, acute and delayed:

- Inhalation:** Prolonged exposure may cause irritation. High concentrations can cause nervous system depression such as dizziness, vomiting, grogginess, drowsiness, headache, and similar narcotic effects.
- Skin contact:** Prolonged exposure can cause skin irritation.
- Eye contact:** Contact causes sever irritation with redness and swelling of the conjunctiva.
- Ingestion:** Dizziness, drowsiness and vomiting.

4.3. Indication of immediate medical attention and special treatment needed, if necessary:

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5. Fire-fighting measures

5.1. Suitable extinguishing media

- Suitable extinguishing media:** Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂). Water may be ineffective but should be used to keep the container exposed to fire cool.
- Unsuitable extinguishing media:** Do not use a heavy water stream. A heavy water stream may spread burning liquid.

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5.2. Specific hazards arising from the chemical:

Fire Hazard: Extremely flammable liquid and vapor.
Explosion Hazard: It can form a mixture of flammable or explosive air and steam.
Reactivity: Strong oxidizers, halogens, sulfur, sulfur compounds.

5.3. Special protective actions for fire-fighters:

Precautionary measures fire: Remove all sources of ignition. All these products have a very low flash point: the use of water spray when fighting a fire can be inefficient. Use misted water to keep containers exposed to fire cool.

Protection during firefighting: Do not enter the fire area without suitable protective equipment. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighter's protective clothing will only provide limited protection.

Firefighting instructions: Small Fire: Use dry chemical, CO₂, water spray or alcohol-resistant foam. In case of a major fire and large quantities: Evacuate the area. Use water spray, mist, or alcohol-resistant foam. Do not use direct jet. Move containers from the fire area if you can do so safely. Fire involving Tanks or Car/Trailer Loads: Fight fire from a maximum distance or use fixed hose supports or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Hazard combustion products: Carbon oxides (CO, CO₂). Irritating or toxic vapors.

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

General measures: Remove all sources of ignition. No smoking, keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. Do not get in eyes, on skin, or on clothing. Do not breathe vapors, mist, or spray.

Protective equipment: Use filter respirator for organic gases and vapors adapted to the concentration in the air of the substance.

Emergency procedures: As an immediate precautionary measure, isolate spill, or leak area for at least 300 meters in all directions. Keep unauthorized personnel away. Stay upwind, uphill, and/or upstream. Ventilate closed spaces before entering.

6.2. Environmental precautions:

Prevent entry to sewers and public waters. Avoid release to the environment.

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6.3. Methods and materials for containment and cleaning up:

For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill, or leak area in all directions. Large spill: Dike far ahead of liquid spill for later disposal. Water spray may reduce vapor but may not prevent ignition in closed spaces.

Methods for cleaning up: Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools. Cautiously neutralize spilled liquid.

SECTION 7. Handling and storage

7.1. Precautions for safe handling:

General measures: Handle empty containers with care because residual vapors are flammable.

Hygiene measures: Handle in accordance with good industrial hygiene and safety procedures. When using, do not eat, drink, or smoke. Wash your hands and other exposed areas with mild soap and water before eating or drinking and again when you are done working.

7.2. Conditions for safe storage, including any incompatibilities:

Storage conditions: Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in original container or corrosive resistant and/or lined container.

Incompatible materials: Strong oxidizers, halogens, sulfur, sulfur compounds.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters:

Name	CAS No.	VLE	
		PPT	CT o P
Diethyl Ether	60-29-7	400 ppm	500 ppm
Ethyl Alcohol	64-17-5	1000 ppm	Not established

8.2. Appropriate engineering controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment.

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8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection: Wear protective gloves.

Eye protection: Chemical goggles or face shield.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known Wear positive pressure self-contained breathing apparatus (SCBA).

Additional information: When using, do not eat, drink, or smoke.

SECTION 9. Physicals and chemicals properties

Physical state	Liquid
Colour	Colorless
Odour	Pungent/sweet
Melting point/freezing point	-116 °C
Boiling point	34.40 °C
Flammability	Not available
Lower flammability limit	1.9%
Upper flammability limit	48%
Flash point	Closed cup -45°C Open cup -40°C
Auto-ignition temperature	180 °C
Decomposition temperature	Not available
pH	7
Kinematic viscosity	0.23 cP @ 25°C
Solubility	≥ 100mg/l @ 20°C
Partition coefficient n-octanol/water (log value)	0.89
Vapour pressure	440 mmHg @ 20°C
Density	0.7140-0.7200 g/cm ³
Relative vapour density	2.60 @ 20°C

SECTION 10. Stability and reactivity

10.1. Reactivity:

Reacts violently with oxidants causing fire and explosion hazard.

10.2. Chemical stability:

Extremely flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

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10.3. Possibility of hazardous reactions:

Hazardous polymerization will not occur.

10.4. Conditions to avoid:

Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.

10.5. Incompatible materials:

Strong acids, strong bases, strong oxidizers.

10.6. Hazardous decompositions products:

Carbon oxides (CO, CO₂). Irritating or toxic vapors.

SECTION 11. Toxicological information

11.1. Information on the likely routes of exposure

Inhalation:	Prolonged exposure may cause irritation. High concentrations can cause nervous system depression such as dizziness, vomiting, grogginess, drowsiness, headache, and similar narcotic effects.
Skin contact:	Prolonged exposure can cause skin irritation.
Eye contact:	Contact causes sever irritation with redness and swelling of the conjunctiva.
Ingestion:	Dizziness, drowsiness and vomiting.

11.2. Symptoms related to the physical, chemical and toxicological characteristics:

Skin corrosion/irritation:	Conclusive but not sufficient for classification.
Serious eye damage/irritation:	Conclusive but not sufficient for classification.
Respiratory or skin sensitization:	Conclusive but not sufficient for classification.
Symptoms/injuries after skin contact:	Prolonged exposure can cause skin irritation.
Symptoms/injuries after ingestion:	Dizziness, drowsiness and vomiting.
Symptoms/injuries after inhalation:	Prolonged exposure may cause irritation. High concentrations can cause nervous system depression such as dizziness, vomiting, grogginess, drowsiness, headache, and similar narcotic effects.

11.3. Delayed and immediate effects and also chronic effects from short-and term exposure:

Germ cell mutagenicity:	Conclusive but not sufficient for classification.
Carcinogenicity:	Conclusive but not sufficient for classification.
Teratogenicity:	Conclusive but not sufficient for classification.

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Reproductive toxicity:	Conclusive but not sufficient for classification.
Specific target organ toxicity (single exposure):	Category 3 (Narcotics effects. Rout Exposition: Oral)
Specific target organ toxicity (repeated exposure):	Conclusive but not sufficient for classification.

11.4. Numerical measure of toxicity (such as acute toxicity estimates):

LD₅₀ and LC₅₀ data:

Diethyl Ether (60-29-7)	
Acute Toxicity Oral	LD ₅₀ Oral Rat: 1200-1700 mg/kg
Acute Toxicity Inhalation	LD ₅₀ : 97,000 mg/m ³ aire
Ethyl Alcohol (64-17-5)	
Acute Toxicity Oral	LD ₅₀ rat: 10,470 mg/kg
Acute Toxicity Inhalation	LC ₅₀ rat: 124.7 mg/kg, t=4h
Acute Toxicity Dermal	LD ₅₀ rabbit: 20 mg/kg

SECTION 12. Ecological information

12.1. Toxicity:

Diethyl Ether (60-29-7)	
Short-term toxicity to fish	LC ₅₀ (48h): 2138 mg/l 2560 mg/l (Specie: Golden orfe)
Short-term toxicity to aquatic invertebrates	EC ₅₀ (48h): 165 mg/l
Ethyl Alcohol (64-17-5)	
Short-term toxicity to fish	LC50:12.0-16.0 ml/l, t=96h, Specie: Oncorhynchus mykiss.
Long-term toxicity to fish	LC50: >100 mg/l, t=48h, Especie: Pimephales promelas.
Short-term toxicity to aquatic invertebrates	EC50: 9269-14221 mg/l, t=48h, Especie: Daphnia magna.

12.2. Persistence and degradability:

Diethyl ether is not considered to be biodegradable in water. Partitioning from water and soil to the air is expected based on the vapour pressure and large Henry's Law constant.

12.3. Bioaccumulative potential:

Based on the weight-of-evidence, the substance is considered to have low bioaccumulation potential in the aquatic compartment.

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12.4. Mobility in soil:

Not available.

12.5. Other adverse effects:

Avoid release to the environment.

SECTION 13. disposal considerations

13.1. Disposal methods:

Waste disposal

recommendations:

Dispose of contents/container in accordance with local, regional, national, and international, territorial, and provincial regulations.

SECTION 14. Transport information

14.1.	<u>UN Number:</u>	1155
14.2.	<u>UN Proper Shipping Name:</u>	Diethyl Ether
14.3.	<u>Transport hazard class(es):</u>	3
14.4.	<u>Packing group:</u>	I
14.5.	<u>Environmental hazard:</u>	Not available
14.6.	<u>Special precautions for use:</u>	Not available
14.7.	<u>Transport in bulk according to IMO instruments:</u>	Diethyl Ether

SECTION 15. Regulatory information

15.1. Safety, health environmental regulation specific for the product in question

The Emergency Response Guide for this product is No. 127.

SECTION 16. Other information

NFPA 704



The information is considered correct but is not exhaustive and will be used solely as guidance, which is based on current knowledge of the chemical or mixture and is applicable to appropriate safety precautions for the product.

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DOCUMENT CHANGE HISTORY

Version	Date	Change history	Reason for change	Who
1.0	27/03/25	New document.	Compliance with ISO 9001:2015	ARDJ270325