



Safety Data Sheet

Dimethylether

Section 1: Product and Company Identification

Middlesex Gases & Technologies

292 Second Street
P.O. Box 490249
Everett, MA 02149
(617) 387-5050
(800) 649-6704
Fax (617) 387-3537
<http://www.middlesexgases.com/>

Product Code: Dimethylether

Section 2: Hazards Identification



Warning

Hazard Classification:

Gases Under Pressure

Hazard Statements:

Contains gas under pressure; may explode if heated

Precautionary Statements

Storage:

Protect from sunlight.
Store in well-ventilated place.

Section 3: Composition/Information on Ingredients

CAS #
115-10-6

Chemical Substance	Chemical Family	Trade Names
DIMETHYL ETHER	ethers, aliphatic	METHYL ETHER; WOOD ETHER; METHYL OXIDE; OXYBISMETHANE; METHYOXYMETHANE; Dimethyl oxide; DME; UN 1033

Section 4: First Aid Measures

Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115 F; 41-46 C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.	Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.	If a large amount is swallowed, get medical attention.	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.	For inhalation, consider oxygen.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Carbon dioxide, regular dry chemical Large fires: Flood with fine water spray.	Carbon monoxide, carbon dioxide	<ul style="list-style-type: none"> ▪ Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply ▪ Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply

Section 6: Accidental Release Measures

Personal Precautions	Environmental Precautions	Methods for Containment
Keep unnecessary people away, isolate hazard area and deny entry. Do not touch spilled material. Ventilate closed spaces before entering.	Avoid heat, flames, sparks and other sources of ignition.	Stop leak if possible without personal risk. Reduce vapors with water spray. Remove sources of ignition.

Methods for Cleanup	Other Information
Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container	Not available.

Section 7: Handling and Storage

Handling	Storage
Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.106. Store outside or in a detached building. Inside storage: Store in a cool, dry place. Store in a well-ventilated area.	Grounding and bonding required. Keep separated from incompatible substances. Protect from physical damage. Avoid heat, flames, sparks and other sources of ignition.

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines
DIMETHYL ETHER: 1000 ppm AIHA WEEL recommended TWA

Engineering Controls

Handle only in fully enclosed systems.

Eye Protection	Skin Protection	Respiratory Protection
Wear splash resistant safety goggles with a face shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.	For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.	Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply

General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

Section 9: Physical and Chemical Properties

Physical State	Appearance	Color	Change in Appearance	Physical Form	Odor	Taste
Gas	Colorless	Colorless	N/A	Gas	Sweet odor	N/A

Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
-42 F (-41 C) (CC)	Not available	Not available	662 F (350 C)	0.27	0.034

Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
-11 F (-24 C)	-224 F (-142 C)	3982 mmHg @ 20 C	1.6 (Air =1)	0.661	Moderately soluble (4.56 g/100 mL @ 25 C)	Not applicable	Not available	Not applicable	Not available

Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
46.08	C2-H6-O	Not available	Not available	100%	Not applicable	Soluble: Alcohol, ether, chloroform, acetone, organic solvents

Section 10: Stability and Reactivity

Stability	Conditions to Avoid	Incompatible Materials
May form explosive peroxides. Avoid prolonged storage or contact with air, light or storage and use above room temperature.	May form explosive peroxides. Avoid prolonged storage or contact with air, light or storage and use above room temperature.	Oxidizing materials, combustible materials

Hazardous Decomposition Products	Possibility of Hazardous Reactions
Miscellaneous decomposition products	Will not polymerize.

Section 11: Toxicology Information

Acute Effects

Oral LD50	Dermal LD50	Inhalation
Not available	Not available	Irritation, difficulty breathing, headache, drowsiness, symptoms of drunkenness, blurred vision

Eye Irritation	Skin Irritation	Sensitization
Irritation (possibly severe) liquid: frostbite	Irritation (possibly severe) liquid: frostbite	Respiratory tract irritation, skin irritation, eye irritation, central nervous system depression

Chronic Effects

Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Not available	Not available	Available.	No data

Section 12: Ecological Information

Fate and Transport

Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Not available	Not available	Not available

Section 13: Disposal Considerations

Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D003. Dispose in accordance with all applicable regulations.

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
Dimethyl ether	UN1033	2.1	Not applicable	2.1	Forbidden	150 kg	N/A

Canadian Transportation of Dangerous Goods

Shipping Name	UN Number	Class	Packing Group / Risk Group
Dimethyl ether	UN1033	2.1	Not applicable

Section 15: Regulatory Information

U.S. Regulations

CERCLA Sections	SARA 355.30	SARA 355.40
Not regulated.	Not regulated.	Not regulated.

SARA 370.21

Acute	Chronic	Fire	Reactive	Sudden Release
Yes	No	Yes	Yes	Yes

SARA 372.65

Not regulated.

OSHA Process Safety

Not regulated.

State Regulations

CA Proposition 65

Not regulated.

Canadian Regulations

WHMIS Classification

AB

National Inventory Status

US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Listed on inventory.	Not listed.	Not determined.

Section 16: Other Information

NFPA Rating

HEALTH=2 FIRE=4 REACTIVITY=1

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard