1. Product and Company Identification

Product name: Dimethyl Ether
Chemical formula: C2H6O
Synonyms: Methyl ether; methyl oxide; wood ether; oxybismethane; methyoxymethane; UN 1033
Company: Med Tech Gases, Inc.
20 Hall Street
Medford, MA 02155
Telephone: 800-FINE-GAS
Emergency: 800-424-9300

2. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>% Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl Ether</td>
<td>115-10-6</td>
<td>100%</td>
</tr>
</tbody>
</table>

3. Hazards Identification

Emergency Overview
May cause respiratory tract irritation, skin irritation, eye irritation, central nervous system depression.
Flammable gas. May cause flash fire. May form peroxides during prolonged storage.

Potential Health Effects
- **Inhalation**: Irritation, difficulty breathing, headache, drowsiness, symptoms of drunkenness, blurred vision.
- **Eye contact**: Irritation (possibly severe).
- **Skin contact**: Irritation (possibly severe).
- **Ingestion**: No information on significant adverse effects.
- **Chronic Health Hazard**: None.

4. First Aid Measures

- **Eye contact**: Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.
- **Skin contact**: If frostbite occurs, 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.
- **Ingestion**: If a large amount is swallowed, get medical attention.
- **Inhalation**: 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.

Note to physicians: For inhalation, consider oxygen.
5. Fire-Fighting Measures

**Suitable extinguishing media:** Carbon dioxide, regular dry chemical.

**Specific hazards:** Severe fire hazard. Vapor/air mixtures are explosive. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Electrostatic charges may be generated by flow or agitation resulting in ignition or explosion. Severe explosion hazard.

**Fire fighting:**
- Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers from unmanned hose holder or monitor nozzle until well after the fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck: Stop leak if possible without personal risk. Let fire burn unless leak can be stopped immediately. For smaller tanks or cylinders, extinguish and isolate from other flammables. Evacuation radius: 800 meters (1/2 mile). Stop flow of gas.

6. Accidental Release Measures


**Additional advice:** None.

7. Handling and Storage

**Handling**
- Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

**Storage**

8. Exposure Controls / Personal Protection

**Exposure limits**
- 1000 ppm TWA

**Engineering measures/Ventilation**
- Provide local exhaust or process enclosure ventilation system. Ventilation equipment should be explosion-resistant if explosive concentrations of materials are present. Ensure compliance with applicable exposure limits.

**Personal protective equipment**
- **Respiratory protection:** Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use. Any chemical cartridge respirator with organic vapor cartridge(s). Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
9. Physical and Chemical Properties

Form : Gas.
Color : Colorless.
Odor : Sweet odor.
Molecular weight : 46.08
Vapor pressure : 3982 mmHg @ 20°C
Vapor density : 1.6 (air = 1)
Specific gravity : 0.661 (water = 1)
Boiling point : -24°C
Melting point : -142°C
Water solubility : 7.6%

10. Stability and Reactivity

Stability : May form explosive peroxides. Avoid prolonged storage or contact with air, light or storage and use above room temperature.
Conditions to avoid : Avoid heat, flames, sparks or other sources of ignition. Minimize contact with material. Containers may rupture or explode if exposed to heat.
Materials to avoid : Oxidizing materials, combustible materials.
Hazardous decomposition products : Thermal decomposition products: miscellaneous decomposition products.

11. Toxicological Information

The components of this material have been reviewed in various sources and the following endpoints are published:
DIMETHYL ETHER (115-10-6) : Inhalation LC50 Rat: 308.5 mg/L/4H

Acute Toxicity Level
DIMETHYL ETHER (115-10-6) : Slightly toxic: Inhalation.

Component Carcinogenicity
None of this product’s components are listed by ACGIH, IARC, NTP, OSHA or DFG.

Local Effects
DIMETHYL ETHER (115-10-6) : Irritant: inhalation, skin, eye.

Target Organs
DIMETHYL ETHER (115-10-6) : Central nervous system

12. Ecological Information

No LOLI ecotoxicity data are available for this product’s components.

13. Disposal Considerations


Contaminated packaging : Return cylinder to supplier.

14. Transport Information

DOT (US only)
Proper shipping name : Dimethyl Ether
Class : 2.1
UN/ID No. : UN1033
Labeling : Flammable Gas

15. Regulatory Information

U.S. Federal Regulations
None of this product’s components are listed under SARA Section 302/304 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA 311/312
Acute: Yes
Chronic: No
Fire: Yes
Reactive: Yes
Pressure: Yes

U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
<th>RI</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMETHYL ETHER</td>
<td>115-10-6</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Not regulated under California Proposition 65