SAFETY DATA SHEET: METHYL-t-BUTYL ETHER

1. IDENTIFICATION

Product Name: METHYL-t-BUTYL ETHER
Synonyms: tert-Butyl methyl ether; 2-Methoxy-2-methylpropane; MTBE
Formula and Formula Weight: CH$_3$OC(CH$_3$)$_3$ 88.15
Integra numbers beginning with: M690.15
Recommended Use: Commercial/industrial use
Restrictions on Use: No information available

INTEGRA Chemical Company
24 Hour Emergency Response: CHEMTREC 800-424-9300 (Outside USA 703-527-3887)
1216 6th Ave N
Kent WA 98032
Phone: 253-479-7000

2. HAZARDS IDENTIFICATION

OSHA Classification:
Skin Corrosion/Irritation 2 Causes skin irritation.
Flammable Liquids 2 Highly flammable liquid and vapor.

Signal Word: DANGER

Precautionary Statements

Prevention:

Keep away from heat, sparks, open flames, hot surfaces. – No smoking.
Keep container tightly closed.
Ground, bond container and receiving equipment.
Use explosion-proof electrical, ventilating, lighting, equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Wear protective gloves, eye protection, face protection.

Response:

If on skin: Wash with plenty of water.
If on skin (or hair): Rinse skin with water, shower.
Specific treatment (see first aid section on this label)
If skin irritation occurs: Get medical advice, attention.
Take off contaminated clothing and wash it before reuse.

Storage:
Store in a well ventilated place. Keep cool.

Disposal:
Dispose of contents, container in accordance with all governmental regulations.

Hazards Not Otherwise Classified: No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component: Methyl tert-butyl ether
Synonyms: tert-Butyl methyl ether; 2-Methoxy-2-methylpropane; MTBE
CAS #: 01634-04-4
% Weight: 100

4. FIRST AID MEASURES

Inhalation: Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult administer oxygen. Seek medical attention.
Eye Contact: Flush eyes with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Seek immediate medical attention.
Skin Contact: Remove contaminated clothing. Flush skin with plenty of water. Seek medical attention if irritation develops.
Ingestion: Rinse mouth and give victim large quantities of water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.
Additional notes: Symptoms and effects include skin, eye, respiratory, gastrointestinal irritation; eye burns; drowsiness, dizziness; lightheadedness, headache, nausea, vomiting; adverse respiratory, eye, and larynx muscles effects; central nervous system effects.

5. FIRE-FIGHTING MEASURES
9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid
Odor: Characteristic ether- or terpene-like odor
Odor Threshold: 0.053 ppm
pH: Not available
Melting/Freezing Point: -109 °C
Initial Boiling Point and Boiling Range: 55 °C
Flash Point: -27 °C
Evaporation Rate: Not available
Flammability: Not available
Vapor Pressure: 245 mm Hg @25°C
Flammable or Explosive Limits (% by volume in air)
  Upper: 15.1
  Lower: 1.6
Vapor Density: Not available
Relative Density: 0.74 Water=1
Solubility: 4.8 g/100 g water
Partition Coefficient: n-octanol/water 1.06
Auto-Ignition Temperature: 435 °C
Decomposition Temperature: Not available
Viscosity: Not available

10. STABILITY AND REACTIVITY

Reactivity: No information available
Stability: Stable
Possibility of Hazardous Reactions: Hazardous polymerization will not occur
Conditions to Avoid: Heat, sparks and open flame.
### 11. TOXICOLOGICAL INFORMATION

**Effects of Over Exposure:**

- **Inhalation:** Harmful if inhaled. Irritating to the upper respiratory tract and mucous membranes. May adversely affect central nervous system. May cause nausea, headache, dizziness, lightheadedness.
- **Skin Contact:** Contact with skin may be irritating. Material may be absorbed through the skin in harmful amounts.
- **Eye Contact:** Contact may burn or damage the eyes. Vapors are irritating to the eyes.
- **Ingestion:** Harmful if swallowed. Ingestion may cause headache, dizziness, nausea, vomiting, gastrointestinal irritation. Ingestion of large quantities may adversely affect respiratory, eye, and larynx muscles.
- **Chronic Effects:** Cumulative exposure may lead to poisoning symptoms similar to those outlined under acute exposure.
- **Target Organs:** None identified
- **Additional Effects:** May aggravate pre-existing skin disorders, eye disorders, respiratory system disease
- **Reproductive Effects:** None identified
- **Carcinogenicity:** None identified

**Toxicity Data:**

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 (inhalation, rat)</th>
<th>LD50 (oral, rat)</th>
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<tbody>
<tr>
<td>Methyl tert-butyl ether</td>
<td>85 mg/L/4hr</td>
<td>4000 mg/kg</td>
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### 12. ECOLOGICAL INFORMATION

**Aquatic Toxicity Data:**

- Methyl tert-butyl ether LC50 Fathead minnow: 672 mg/L - 96h

**Terrestrial Toxicity Data:**

- No information available

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available

**Mobility in soil:** No information available

**Other adverse effects:** No information available

### 13. DISPOSAL CONSIDERATIONS

- **Disposal Procedures:** Dispose of material and containers in accordance with all local, state and federal regulations.

### 14. TRANSPORTATION INFORMATION

- **UN Number:** UN2398
- **Proper Shipping Name:** Methyl tert-butyl ether
- **Packing Group:** II
- **Hazard Class:** 3
- **Environmental hazards:** No information available
- **Special precautions:** No information available
- **Bulk transport:** No information available

### 15. REGULATORY INFORMATION

- Methyl tert-butyl ether is listed in the TSCA inventory and in SARA 313.

### 16. OTHER INFORMATION


NE = Not established, NA = Not applicable or Not available

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**** END OF SDS ****