



**TERT-BUTYL METHYL ETHER**  
**CAS No 1634-04-4**

**MATERIAL SAFETY DATA SHEET**  
**SDS/MSDS**

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifiers**

Product name : tert-Butyl Methyl Ether

CAS-No. : 1634-04-4

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, Industrial & for professional use only.

**1.3 Details of the supplier of the safety data sheet**

Company : Central Drug House (P) Ltd  
7/28 Vardaan House  
Ansari Road Daryaganj  
New Delhi-110002  
INDIA

Telephone : +91 11 49404040  
Email : [care@cdhfinechemical.com](mailto:care@cdhfinechemical.com)

**1.4 Emergency telephone number**

Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

Flammable liquids (Category 2), H225

Skin irritation (Category 2), H315

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 Label elements**

**Labelling according Regulation (EC) No 1272/2008**

Pictogram



Signal word : Danger

Hazard statement(s)

H225

Highly flammable liquid and vapour.

H315

Causes skin irritation.

Precautionary statement(s)

P210

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Supplemental Hazard Statements

none

## 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms : MTBE  
Methyl tert-butyl ether

Formula : C<sub>5</sub>H<sub>12</sub>O  
Molecular weight : 88.15 g/mol  
CAS-No. : 1634-04-4  
EC-No. : 216-653-1  
Index-No. : 603-181-00-X

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component		Classification	Concentration
<b>tert-Butyl methyl ether</b>			
CAS-No.	1634-04-4	Flam. Liq. 2; Skin Irrit. 2;	<= 100 %
EC-No.	216-653-1	H225, H315	
Index-No.	603-181-00-X		

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

## 5.2 Special hazards arising from the substance or mixture

Carbon oxides

## 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

## 5.4 Further information

Use water spray to cool unopened containers.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

### 6.4 Reference to other sections

For disposal see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store under inert gas. hygroscopic  
Storage class (TRGS 510): Flammable Liquids

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

### Body Protection

Impervious clothing, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engine protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form: liquid
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	No data available
f) Initial boiling point and boiling range	55 - 56 °C - lit.
g) Flash point	-33.0 °C - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 15.1 %(V) Lower explosion limit: 1.6 %(V)
k) Vapour pressure	764.1 mmHg at 55.0 °C 209.4 mmHg at 20.0 °C
l) Vapour density	No data available
m) Relative density	0.74 g/cm <sup>3</sup> at 20 °C
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	log Pow: 1.77log Pow: 0.94
p) Auto-ignition temperature	374.0 °C
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

### 9.2 Other safety information

No data available

## **SECTION 10: Stability and reactivity**

### **10.1 Reactivity**

No data available

### **10.2 Chemical stability**

Stable under recommended storage conditions.

### **10.3 Possibility of hazardous reactions**

No data available

### **10.4 Conditions to avoid**

Heat, flames and sparks. Extremes of temperature and direct sunlight.

### **10.5 Incompatible materials**

Oxidizing agents, Strong acids

### **10.6 Hazardous decomposition products**

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions. - Carbon oxides

In the event of fire: see section 5

## **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

#### **Acute toxicity**

LD50 Oral - Rat - 4,000 mg/kg(tert-Butyl methyl ether)

LC50 Inhalation - Rat - 4 h - 23576 ppm(tert-Butyl methyl ether)

#### **Skin corrosion/irritation**

Skin - Rabbit(tert-Butyl methyl ether)

Result: Skin irritation

#### **Serious eye damage/eye irritation**

Eyes - Rabbit(tert-Butyl methyl ether)

Result: No eye irritation

#### **Respiratory or skin sensitisation**

Will not occur(tert-Butyl methyl ether)

#### **Germ cell mutagenicity**

No data available(tert-Butyl methyl ether)

#### **Carcinogenicity**

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (tert-Butyl methyl ether)

#### **Reproductive toxicity**

No data available(tert-Butyl methyl ether)

#### **Specific target organ toxicity - single exposure**

No data available(tert-Butyl methyl ether)

#### **Specific target organ toxicity - repeated exposure**

No data available

#### **Aspiration hazard**

No data available(tert-Butyl methyl ether)

#### **Additional Information**

RTECS: KN5250000

Nausea, Vomiting, Dizziness, Central nervous system depression, Aspiration or inhalation may cause chemical pneumonitis., MTBE (methyl-tert-butyl ether) is reported to metabolize to tert-butyl alcohol and formaldehyde by microsomal demethylation, MTBE (methyl-tert-butyl ether) should be considered a "potential human car tumors of testes in male rats and an increase in lymphomas, leukemias, an, In another unpublished study MTBE was shown to be carcinogenic due to "inc rats and an "increase in the incidence of hepatocellular adenomas" in fem, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (tert-Butyl methyl ether)

Central nervous system - (tert-Butyl methyl ether)

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 672.00 mg/l - 96 h(tert-Butyl methyl ether)

LC50 - other fish - > 1,000.00 mg/l - 96 h(tert-Butyl methyl ether)

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 472 mg/l - 48 h(tert-Butyl methyl ether)

Toxicity to algae EC50 - Pseudokirchneriella subcapitata (green algae) - 491 mg/l - 96 h(tert-Butyl methyl ether)

### 12.2 Persistence and degradability

Biodegradability Result: 0 % - Not readily biodegradable. (OECD Test Guideline 301D)

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available(tert-Butyl methyl ether)

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 2398

IMDG: 2398

IATA: 2398

