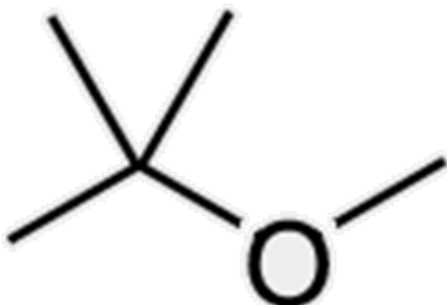


## Methyl t-Butyl Ether (MTBE)



**Methyl t-Butyl Ether (MTBE)** is a clear, colorless organic liquid compound. MTBE is widely used in global markets as a gasoline oxygenate. High Purity MTBE is used as a solvent in the pharmaceutical industry and as a lab solvent. MTBE is also used as a chemical intermediate to produce high purity isobutylene.

### CAS number

1634-04-4

### Synonyms

tert-butyl methyl ether, Propane, 2-methoxy-2-methyl-, methyl-1,1-dimethylethylether

### Product code

40900

### Typical Physical Properties of MTBE

Molecular Weight	88.15 g/mol
Empirical Formula	C <sub>5</sub> H <sub>12</sub> O
Appearance	Colorless Liquid
Freezing Point	-109°C (-164°F)
Flash Point – Closed Cup	-28°C (-18°F)
Boiling Point @ 760mmHg	55°C (131°F)
Autoignition Temperature	374°C (705°F)
Specific Gravity @ 25/25°C	0.738
Vapor Pressure @ 20°C	204.0 mmHg
Vapor Density (air = 1)	3.0
Evaporation Rate (nBuAc = 1)	8.14
Solubility @ 20°C	
(in Water)	4.3%
(Water in)	1.4%
Hazen Solubility Parameters	
Dispersion	6.7
Polar	1.7
Hydrogen Bonding	2.5
Total	7.4
Refractive Index @ 25°C	1.3689
Kinematic Viscosity @ 25°C	0.47 cSt
Expansion Coefficient @60°F, 1 atm per °F	0.00078
Surface Tension @ 32°C	18.3 dynes/cm
Lower Flammability in Air	1.3% v/v
Upper Flammability in Air	8.0% v/v
Specific Heat	0.50 Btu/lb. °F
Heat of Vaporization @ normal boiling point	140 Btu/lb.

Dipole Moment @25°C	1.4 debye
Dielectric Constant @ 20°C	2.6
Odor Threshold	0.053 ppm
Odor Threshold in Water	15 µg/l (2.5 - 190 µg/l variable sources)
Taste Threshold in Water	40 µg/l (2.5 - 680 µg/l variable sources)

Note: The properties reported above are typical physical properties. Monument Chemical in no way guarantees that the product from any particular lot will conform exactly to the given values.

## Health and safety information

Under current U.S. OSHA's Hazardous Communication program MTBE is classified as a flammable liquid and can cause skin irritation. Keep the material away from heat sources, hot surfaces, open flames, and sparks. Use only in a well-ventilated area.

Observe good industrial hygiene practices and use appropriate Personal Protective Equipment.

For full safety information please refer to the Safety Data Sheet.

## Storage and Handling

General industry practice is to store MTBE in carbon steel vessels. Storage in properly lined steel or stainless steel to avoid slight discoloration from carbon steel is recommended. Product stored or delivered in unlined carbon steel vessels must be filtered due to technically unavoidable particles.

MTBE should be stored under a nitrogen blanket when available. This product may absorb water if exposed to air.

MTBE should be stored only in tightly closed, properly

vented containers away from heat, sparks, open flame or strong oxidizing agents. Use only non-sparking tools. Containers should be grounded before beginning transfer. Electrical equipment should conform to national electric code. Handle empty containers carefully. Flammable combustible residue remains after emptying.

Provided proper storage and handling precautions are taken, MTBE manufactured and delivered by Monument Chemical is stable for at least 12 months from the date of manufacture. MTBE that is subsequently repackaged, handled and/or delivered by third parties may have a different shelf life and may require third party shelf life studies. Product past the retest date should be evaluated to confirm that all specifications are within their limits before use.

## Additional information

To learn more about Monument Chemical and the products and services we offer please visit our website at [www.monumentchemical.com](http://www.monumentchemical.com).

Effective Date: 10/29/2021

Revision: 3

## Disclaimers

Please refer to the Safety Data Sheet (SDS) for complete information on Storage and Handling, Toxicological Properties, Personal Protection, First Aid, Spill and Leak Procedures, and Waste Disposal. To order an SDS, email [SDS@monumentchemical.com](mailto:SDS@monumentchemical.com). Before using or handling this product, the SDS should be thoroughly reviewed.

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