



Methyl-tert.-butylether (MTBE)

Product Datasheet

Item number: 60-121

General information

CAS-No.	1634-04-4
Appearance	Clear, clourless liquid of low viscosity with a characteristic terpene-like-odour
Chemische Bezeichnung	Methyl-tert-butyl ether
Synonyms	<ul style="list-style-type: none">• Tert-Butyl-methylether• 2-Methyl-2-methoxypropan

Application

MTBE is commercially used as a gasoline-octane enhancer for Otto-motor engines replacing formerly used oreghano-lead compounds. Subsequent legal requirements for optimal gasoline combustion have lead to widespread use of MTBE.

Properties

MTBE is a highly flammable, non auto-oxidizable, clear, colourless liquid of low viscosity with a characteristic terpene-like odour. It is miscible with organic solvents in all ratios, partly miscible with water. MTBE is chemically stable in alkaline medium as well as in the presence of weak acids, air and oxygen. For details regards safety, classification, toxicological and eco-toxicological date as well as labeling see the latest version of our material safety data sheet.

MTBE is classified as highly flammable and skin irritant.

Specification

Property	Unit	Min.	Max.
MTBE	% (m / m)	98	
Hydrocarbons up to max C ₈	% (m / m)		0.5
tert.-Butanol	% (m / m)		1
Mathanol	% (m / m)		1
Water	mg / kg		500

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Transport and storage

The storage behaviour of MTBE is similar to that of gasoline. It may be stored for an unlimited period even in the presence of air. The product can be dispatched in containers, road- and rail tankers or by ship.

Materials

The container materials do not need special requirements, hence aluminium, iron, zinc and galvanized iron, steel or stainless steel may be used.

Sealant elastomers such as PTFE, ABR/NBR or Thio-caoutchouc are suitable.

Typical physical data

Property	Unit	Value
Molecular mass (C ₅ H ₁₂ O)		88.15
Oxygen content	%	18.12
Boiling point at 1013 hPa	°C	55.3
Freezing Point	°C	- 108.6
Heat of evaporation	kJ / kg	336.8
Heat of combustion at 25 °C	MJ / kg	- 38.22
Viscosity at 20 °C	mPa s	0.36
	mm ² / s	0.49

Vapour pressure

°C	-10	0	10	20	30	40
Mbar / h Pa	64	108	174	271	409	599

Reid vapour pressure 540 hPa

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