Butane, 2-methoxy-2,3,3-trimethyl-

Other names: Ether, methyl 1,1,2,2-tetramethylpropyl
2-Methoxy-2,3,3-trimethylbutane
Inchi: InChI=1S/C8H18O/c1-7(2,3)8(4,5)9-6/h1-6H3
InchiKey: FTACTAWTKDTQSA-UHFFFAOYSA-N
Formula: C8H18O
SMILES: COC(C)(C)C(C)(C)C
Mol. weight [g/mol]: 130.23
CAS: 27705-21-1

Physical Properties

Property code	Value	Unit	Source
gf	-82.84	kJ/mol	Joback Method
hf	-358.17	kJ/mol	Joback Method
hfus	2.84	kJ/mol	Joback Method
hvap	33.22	kJ/mol	Joback Method
log10ws	-2.13		Crippen Method
logp	2.458		Crippen Method
mcvol	129.450	ml/mol	McGowan Method
pc	2589.85	kPa	Joback Method
tb	398.40	K	Joback Method
tc	584.50	K	Joback Method
tf	206.99	K	Joback Method
vc	0.479	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	260.30	J/mol×K	398.40	Joback Method
cpg	276.06	J/mol×K	429.42	Joback Method
cpg	291.01	J/mol×K	460.43	Joback Method
cpg	305.18	J/mol×K	491.45	Joback Method
cpg	318.61	J/mol×K	522.47	Joback Method
cpg	331.31	J/mol×K	553.49	Joback Method
cpg	343.33	J/mol×K	584.50	Joback Method

dvisc	0.0127059	Pa×s	206.99	Joback Method
dvisc	0.0043347	Pa×s	238.89	Joback Method
dvisc	0.0019053	Pa×s	270.79	Joback Method
dvisc	0.0009959	Pa×s	302.69	Joback Method
dvisc	0.0005891	Pa×s	334.60	Joback Method
dvisc	0.0003818	Pa×s	366.50	Joback Method
dvisc	0.0002653	Pa×s	398.40	Joback Method

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C27705211&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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