Isopropyl tert-pentyl ether

Other names:	2-methyl-2-(1-methylethoxy)butane
	butane, 2-methyl-2-(1-methylethoxy)-
	ether, isopropyl tert-pentyl
Inchi:	InChI=1S/C8H18O/c1-6-8(4,5)9-7(2)3/h7H,6H2,1-5H3
InchiKey:	WICKZWVCTKHMNG-UHFFFAOYSA-N
Formula:	C8H18O
SMILES:	CCC(C)(C)OC(C)C
Mol. weight [g/mol]:	130.23

Physical Properties

Property code	Value	Unit	Source
gf	-88.12	kJ/mol	Joback Method
hf	-354.70	kJ/mol	Joback Method
hfus	6.73	kJ/mol	Joback Method
hvap	34.13	kJ/mol	Joback Method
log10ws	-2.48		Crippen Method
logp	2.600		Crippen Method
mcvol	129.450	ml/mol	McGowan Method
pc	2561.10	kPa	Joback Method
rinpol	772.00		NIST Webbook
tb	401.19	K	Joback Method
tc	579.71	K	Joback Method
tf	189.57	K	Joback Method
vc	0.484	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	258.89	J/mol×K	401.19	Joback Method
cpg	273.44	J/mol×K	430.94	Joback Method
cpg	287.38	J/mol×K	460.70	Joback Method
cpg	300.73	J/mol×K	490.45	Joback Method
cpg	313.49	J/mol×K	520.20	Joback Method
cpg	325.69	J/mol×K	549.95	Joback Method

cpg	337.34	J/mol×K	579.71	Joback Method
dvisc	0.0136359	Pa×s	189.57	Joback Method
dvisc	0.0040597	Pa×s	224.84	Joback Method
dvisc	0.0016788	Pa×s	260.11	Joback Method
dvisc	0.0008572	Pa×s	295.38	Joback Method
dvisc	0.0005052	Pa×s	330.65	Joback Method
dvisc	0.0003297	Pa×s	365.92	Joback Method
dvisc	0.0002319	Pa×s	401.19	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R559781&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Thermochemistry of Branched Ethers:	https://www.doi.org/10.1021/je034172y
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

Experimental Study of Chemical Equilibrium in the Reacting System of tert-Amyl Alkyl Ether Synthesis:

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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume