Propane, 1,3-dimethoxy-

Other names:	Trimethylene glycol dimethyl ether
	1,3-Dimethoxypropane
	CH3O(CH2)3OCH3
Inchi:	InChI=1S/C5H12O2/c1-6-4-3-5-7-2/h3-5H2,1-2H3
InchiKey:	UUAMLBIYJDPGFU-UHFFFAOYSA-N
Formula:	C5H12O2
SMILES:	COCCCOC
Mol. weight [g/mol]:	104.15
CAS:	17081-21-9

Physical Properties

Property code	Value	Unit	Source
affp	897.20	kJ/mol	NIST Webbook
basg	858.60	kJ/mol	NIST Webbook
gf	-218.78	kJ/mol	Joback Method
hf	-410.97	kJ/mol	Joback Method
hfus	11.08	kJ/mol	Joback Method
hvap	31.54	kJ/mol	Joback Method
ie	9.30	eV	NIST Webbook
ie	9.68	eV	NIST Webbook
log10ws	-0.09		Crippen Method
logp	0.669		Crippen Method
mcvol	93.050	ml/mol	McGowan Method
pc	3333.53	kPa	Joback Method
rinpol	697.30		NIST Webbook
rinpol	700.00		NIST Webbook
tb	358.64	K	Joback Method
tc	524.09	K	Joback Method
tf	190.57	K	Joback Method
vc	0.351	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source

cpg	169.54	J/mol×K	358.64	Joback Method
cpg	210.37	J/mol×K	496.51	Joback Method
cpg	202.53	J/mol×K	468.94	Joback Method
cpg	194.52	J/mol×K	441.36	Joback Method
cpg	186.35	J/mol×K	413.79	Joback Method
cpg	178.02	J/mol×K	386.21	Joback Method
cpg	218.03	J/mol×K	524.09	Joback Method
dvisc	0.0002027	Pa×s	358.64	Joback Method
dvisc	0.0002582	Pa×s	330.63	Joback Method
dvisc	0.0003441	Pa×s	302.62	Joback Method
dvisc	0.0004861	Pa×s	274.61	Joback Method
dvisc	0.0007430	Pa×s	246.59	Joback Method
dvisc	0.0012659	Pa×s	218.58	Joback Method
dvisc	0.0025228	Pa×s	190.57	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C17081219&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method: https://en.wikipedia.org/wiki/Joback_method

Legend

affp: Proton affinity
basg: Gas basicity
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
ie: Ionization energy
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