1,1-Dimethoxycyclopentane

Inchi: InChI=1S/C7H14O2/c1-8-7(9-2)5-3-4-6-7/h3-6H2,1-2H3
InchiKey: AGWFDZMDKNQQHG-UHFFFAOYSA-N
Formula: C7H14O2
SMILES: COC1(OC)CCCC1
Mol. weight [g/mol]: 130.18
CAS: 931-94-2

Physical Properties

Property code	Value	Unit	Source
gf	-170.88	kJ/mol	Joback Method
hf	-397.00 ± 2.00	kJ/mol	NIST Webbook
hfl	-444.00 ± 1.00	kJ/mol	NIST Webbook
hfus	3.90	kJ/mol	Joback Method
hvap	44.50 ± 0.30	kJ/mol	NIST Webbook
hvap	46.07	kJ/mol	NIST Webbook
log10ws	-1.43		Crippen Method
logp	1.550		Crippen Method
mcvol	110.370	ml/mol	McGowan Method
pc	3464.28	kPa	Joback Method
tb	419.92	K	Joback Method
tc	622.05	K	Joback Method
tf	247.91	K	Joback Method
vc	0.403	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	291.33	J/mol×K	588.36	Joback Method
cpg	224.74	J/mol×K	419.92	Joback Method
cpg	239.67	J/mol×K	453.61	Joback Method
cpg	253.73	J/mol×K	487.30	Joback Method
cpg	266.98	J/mol×K	520.99	Joback Method
cpg	279.49	J/mol×K	554.68	Joback Method
cpg	302.56	J/mol×K	622.05	Joback Method

hvapt	46.10	kJ/mol	325.00	NIST Webbook

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C931942&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

cpg:	Ideal gas heat capacity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
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