Cyclopentane, 1,2-dimethoxy-, trans-

Other names: trans-1,2-Dimethoxycyclopentane
Inchi: InChI=1S/C7H14O2/c1-8-6-4-3-5-7(6)9-2/h6-7H,3-5H2,1-2H3/t6-,7-/m0/s1
InchiKey: YLBQPTZQSYROOF-BQBZGAKWSA-N
Formula: C7H14O2
SMILES: COC1CCCC1OC
Mol. weight [g/mol]: 130.18
CAS: 29887-56-7

Physical Properties

Property code	Value	Unit	Source
gf	-173.10	kJ/mol	Joback Method
hf	-412.11	kJ/mol	Joback Method
hfus	11.27	kJ/mol	Joback Method
hvap	35.94	kJ/mol	Joback Method
ie	8.70	eV	NIST Webbook
ie	9.39	eV	NIST Webbook
log10ws	-1.05		Crippen Method
logp	1.200		Crippen Method
mcvol	110.370	ml/mol	McGowan Method
pc	3166.83	kPa	Joback Method
tb	415.01	K	Joback Method
tc	607.96	K	Joback Method
tf	219.77	K	Joback Method
vc	0.404	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	224.23	J/mol×K	415.01	Joback Method
cpg	238.85	J/mol×K	447.17	Joback Method
cpg	252.97	J/mol×K	479.33	Joback Method
cpg	266.58	J/mol×K	511.48	Joback Method
cpg	279.68	J/mol×K	543.64	Joback Method
cpg	292.26	J/mol×K	575.80	Joback Method

cpg	304.32	J/mol×K	607.96	Joback Method
dvisc	0.0015889	Pa×s	219.77	Joback Method
dvisc	0.0009497	Pa×s	252.31	Joback Method
dvisc	0.0006385	Pa×s	284.85	Joback Method
dvisc	0.0004657	Pa×s	317.39	Joback Method
dvisc	0.0003602	Pa×s	349.93	Joback Method
dvisc	0.0002910	Pa×s	382.47	Joback Method
dvisc	0.0002431	Pa×s	415.01	Joback Method

Sources

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=C29887567&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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
ie:	Ionization energy
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

Cheméo (https://www.chemeo.com) is the biggest free database of chemical and physical data for the process industry.