Cyclopentene, 1,5-dimethyl-

Other names:	1,2-DIMETHYL-2-CYCLOPENTENE
	1,5-DIMETHYLCYCLOPENTENE
	2,3-DIMETHYLCYCLOPENTENE
Inchi:	InChI=1S/C7H12/c1-6-4-3-5-7(6)2/h4,7H,3,5H2,1-2H3
InchiKey:	RIICRLQIUAAOOE-UHFFFAOYSA-N
Formula:	C7H12
SMILES:	CC1=CCCC1C
Mol. weight [g/mol]:	96.17
CAS:	16491-15-9

Physical Properties

Property code	Value	Unit	Source
gf	64.94	kJ/mol	Joback Method
hf	-81.02	kJ/mol	Joback Method
hfus	8.65	kJ/mol	Joback Method
hvap	32.39	kJ/mol	Joback Method
log10ws	-2.26		Crippen Method
logp	2.363		Crippen Method
mcvol	94.330	ml/mol	McGowan Method
pc	3505.43	kPa	Joback Method
rinpol	697.00		NIST Webbook
rinpol	706.00		NIST Webbook
rinpol	697.00		NIST Webbook
tb	375.20	K	NIST Webbook
tb	365.70 ± 3.00	K	NIST Webbook
tb	368.90 ± 3.00	K	NIST Webbook
tb	368.64	K	KDB
tc	576.72	K	Joback Method
tf	154.70 ± 0.50	K	NIST Webbook
vc	0.354	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source

cpg	164.57	J/mol×K	378.98	Joback Method
cpg	178.00	J/mol×K	411.94	Joback Method
cpg	190.80	J/mol×K	444.89	Joback Method
cpg	202.99	J/mol×K	477.85	Joback Method
cpg	214.58	J/mol×K	510.81	Joback Method
cpg	225.59	J/mol×K	543.77	Joback Method
cpg	236.05	J/mol×K	576.72	Joback Method
dvisc	0.0016528	Pa×s	192.83	Joback Method
dvisc	0.0009756	Pa×s	223.85	Joback Method
dvisc	0.0006547	Pa×s	254.88	Joback Method
dvisc	0.0004791	Pa×s	285.90	Joback Method
dvisc	0.0003727	Pa×s	316.93	Joback Method
dvisc	0.0003032	Pa×s	347.96	Joback Method
dvisc	0.0002552	Pa×s	378.98	Joback Method
hvapt	37.10	kJ/mol	348.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.38619e+01
Coeff. B	-2.98264e+03
Coeff. C	-5.25280e+01
Temperature range (K), min.	272.26
Temperature range (K), max.	401.36

Sources

Joback Method: https://en.wikipedia.org/wiki/Joback_method

KDB: https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=622

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C16491159&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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

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