Cyclopentylcyclohexane

Other names:	Cyclohexane, cyclopentyl- Cyclohexylcyclopentane
Inchi:	InChI=1S/C11H20/c1-2-6-10(7-3-1)11-8-4-5-9-11/h10-11H,1-9H2
InchiKey:	WVABZRMBCQFXBK-UHFFFAOYSA-N
Formula:	C11H20
SMILES:	C1CCC(C2CCCC2)CC1
Mol. weight [g/mol]:	152.28
CAS:	1606-08-2

Physical Properties

Property code	Value	Unit	Source
chl	-6956.70	kJ/mol	NIST Webbook
gf	102.74	kJ/mol	Joback Method
hf	-155.57	kJ/mol	Joback Method
hfus	10.02	kJ/mol	Joback Method
hvap	40.77	kJ/mol	Joback Method
log10ws	-3.73		Crippen Method
logp	3.757		Crippen Method
mcvol	144.130	ml/mol	McGowan Method
pc	2802.44	kPa	Joback Method
rinpol	1210.00		NIST Webbook
rinpol	1225.00		NIST Webbook
tb	488.30	K	NIST Webbook
tb	489.00 ± 3.00	K	NIST Webbook
tc	713.20	K	Joback Method
tf	232.01	K	Joback Method
vc	0.525	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	334.24	J/mol×K	485.91	Joback Method
cpg	358.53	J/mol×K	523.79	Joback Method
cpg	381.33	J/mol×K	561.67	Joback Method

cpg	402.70	J/mol×K	599.56	Joback Method
cpg	422.69	J/mol×K	637.44	Joback Method
cpg	441.37	J/mol×K	675.32	Joback Method
cpg	458.77	J/mol×K	713.20	Joback Method
dvisc	0.0074291	Pa×s	232.01	Joback Method
dvisc	0.0029653	Pa×s	274.33	Joback Method
dvisc	0.0015129	Pa×s	316.64	Joback Method
dvisc	0.0009046	Pa×s	358.96	Joback Method
dvisc	0.0006029	Pa×s	401.28	Joback Method
dvisc	0.0004341	Pa×s	443.59	Joback Method
dvisc	0.0003310	Pa×s	485.91	Joback Method
hvapt	47.90	kJ/mol	435.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.21994e+01
Coeff. B	-2.53409e+03
Coeff. C	-1.48676e+02
Temperature range (K), min.	361.41
Temperature range (K), max.	516.58

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1606082&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
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

Legend

chl: Standard liquid enthalpy of combustion

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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