Cyclohexane, 1,1'-(1-methylethylidene)bis-

Other names: 2,2-Dicyclohexylpropane
Inchi: InChI=1S/C15H28/c1-15(2,13-9-5-3-6-10-13)14-11-7-4-8-12-14/h13-14H,3-12H2,1-2H3
InchiKey: CCXLOQVMDTWRSP-UHFFFAOYSA-N
Formula: C15H28
SMILES: CC(C)(C1CCCCC1)C1CCCCC1
Mol. weight [g/mol]: 208.38
CAS: 54934-90-6

Physical Properties

Property code	Value	Unit	Source
chl	-8996.00	kJ/mol	NIST Webbook
gf	127.16	kJ/mol	Joback Method
hf	-253.04	kJ/mol	Joback Method
hfus	10.86	kJ/mol	Joback Method
hvap	48.55	kJ/mol	Joback Method
log10ws	-5.17		Crippen Method
logp	5.173		Crippen Method
mcvol	200.490	ml/mol	McGowan Method
pc	2012.70	kPa	Joback Method
tb	559.40 ± 0.50	K	NIST Webbook
tb	559.40 ± 0.60	K	NIST Webbook
tc	812.06	K	Joback Method
tf	288.76 ± 1.00	K	NIST Webbook
tf	288.76 ± 0.30	K	NIST Webbook
vc	0.731	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	547.37	J/mol×K	578.47	Joback Method
cpg	670.68	J/mol×K	773.13	Joback Method
cpg	649.57	J/mol×K	734.20	Joback Method
cpg	626.78	J/mol×K	695.27	Joback Method
cpg	602.22	J/mol×K	656.33	Joback Method

cpg	575.78	J/mol×K	617.40	Joback Method
cpg	690.18	J/mol×K	812.06	Joback Method
dvisc	0.0001755	Pa×s	578.47	Joback Method
dvisc	0.0002528	Pa×s	528.06	Joback Method
dvisc	0.0003934	Pa×s	477.64	Joback Method
dvisc	0.0006794	Pa×s	427.23	Joback Method
dvisc	0.0013582	Pa×s	376.82	Joback Method
dvisc	0.0033629	Pa×s	326.40	Joback Method
dvisc	0.0115959	Pa×s	275.99	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.39148e+01
Coeff. B	-4.30247e+03
Coeff. C	-9.65940e+01
Temperature range (K), min.	412.32
Temperature range (K), max.	596.69

Sources

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

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C54934906&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

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
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume