Benzene, (1-cyclohexylethyl)-

Other names:	Ethane, 1-cyclohexyl-1-phenyl-
	(«alpha»-Methylbenzyl)cyclohexane
	1-Phenyl-1-cyclohexylethane
	1-Cyclohexyl-1-phenylethane
Inchi:	InChI=1S/C14H20/c1-12(13-8-4-2-5-9-13)14-10-6-3-7-11-14/h2,4-5,8-9,12,14H,3,6-7,10-
InchiKey:	HNBJZFPJDFJMLP-UHFFFAOYSA-N
Formula:	C14H20
SMILES:	CC(c1ccccc1)C1CCCCC1
Mol. weight [g/mol]:	188.31
CAS:	4413-16-5

Physical Properties

Property code	Value	Unit	Source
gf	201.42	kJ/mol	Joback Method
hf	-46.72	kJ/mol	Joback Method
hfus	14.37	kJ/mol	Joback Method
hvap	49.08	kJ/mol	Joback Method
log10ws	-4.40		Crippen Method
logp	4.370		Crippen Method
mcvol	173.500	ml/mol	McGowan Method
pc	2455.60	kPa	Joback Method
tb	565.51	K	Joback Method
tc	802.24	K	Joback Method
tf	219.26 ± 0.27	K	NIST Webbook
vc	0.638	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	547.39	J/mol×K	802.24	Joback Method
cpg	432.53	J/mol×K	565.51	Joback Method
cpg	455.40	J/mol×K	604.96	Joback Method
cpg	476.68	J/mol×K	644.42	Joback Method
cpg	496.45	J/mol×K	683.87	Joback Method

cpg	514.78	J/mol×K	723.33	Joback Method
cpg	531.74	J/mol×K	762.78	Joback Method
dvisc	0.0001828	Pa×s	565.51	Joback Method
dvisc	0.0068481	Pa×s	266.34	Joback Method
dvisc	0.0023255	Pa×s	316.20	Joback Method
dvisc	0.0010599	Pa×s	366.06	Joback Method
dvisc	0.0005832	Pa×s	415.93	Joback Method
dvisc	0.0003647	Pa×s	465.79	Joback Method
dvisc	0.0002497	Pa×s	515.65	Joback Method
hvapt	70.80	kJ/mol	379.50	NIST Webbook

Sources

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
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C4413165&Units=SI

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
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume

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