Benzene, (2-cyclohexylethyl)-

Other names:	1-Cyclohexyl-2-phenylethane 1-Phenyl-2-cyclohexylethane Ethane, 1-cyclohexyl-2-phenyl- Phenethylcyclohexane
Inchi:	InChI=1S/C14H20/c1-3-7-13(8-4-1)11-12-14-9-5-2-6-10-14/h1,3-4,7-8,14H,2,5-6,9-12H2
InchiKey:	HYYFAYFMSHAWFA-UHFFFAOYSA-N
Formula:	C14H20
SMILES:	c1ccc(CCC2CCCCC2)cc1
Mol. weight [g/mol]:	188.31
CAS:	1603-61-8

Physical Properties

Property code	Value	Unit	Source
gf	203.86	kJ/mol	Joback Method
hf	-41.44	kJ/mol	Joback Method
hfus	17.89	kJ/mol	Joback Method
hvap	49.46	kJ/mol	Joback Method
log10ws	-4.44		Crippen Method
logp	4.200		Crippen Method
mcvol	173.500	ml/mol	McGowan Method
pc	2436.25	kPa	Joback Method
tb	565.95	K	Joback Method
tc	797.40	K	Joback Method
tf	281.34	K	Joback Method
vc	0.644	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	544.79	J/mol×K	797.40	Joback Method
cpg	432.24	J/mol×K	565.95	Joback Method
cpg	454.54	J/mol×K	604.52	Joback Method
cpg	475.33	J/mol×K	643.10	Joback Method
cpg	494.68	J/mol×K	681.67	Joback Method

cpg	512.67	J/mol×K	720.25	Joback Method
cpg	529.35	J/mol×K	758.82	Joback Method
dvisc	0.0001950	Pa×s	565.95	Joback Method
dvisc	0.0047511	Pa×s	281.34	Joback Method
dvisc	0.0019008	Pa×s	328.78	Joback Method
dvisc	0.0009581	Pa×s	376.21	Joback Method
dvisc	0.0005630	Pa×s	423.65	Joback Method
dvisc	0.0003682	Pa×s	471.08	Joback Method
dvisc	0.0002603	Pa×s	518.52	Joback Method
hvapt	60.70	kJ/mol	389.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.86540e+01
Coeff. B	-7.45976e+03
Temperature range (K), min.	406.16
Temperature range (K), max.	559.10

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=C1603618&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

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

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