Benzene, (3-cyclopentylpropyl)-

Other names:	(3-Cyclopentylpropyl)benzene
	1-Cyclopentyl-3-phenylpropane
	1-Phenyl-3-cyclopentylpropane
	Propane, 1-cyclopentyl-3-phenyl-
Inchi:	InChI=1S/C14H20/c1-2-7-13(8-3-1)11-6-12-14-9-4-5-10-14/h1-3,7-8,14H,4-6,9-12H2
InchiKey:	MCPXEMMILAGOIZ-UHFFFAOYSA-N
Formula:	C14H20
SMILES:	c1ccc(CCCC2CCCC2)cc1
Mol. weight [g/mol]:	188.31
CAS:	2883-12-7

Physical Properties

Property code	Value	Unit	Source
gf	215.96	kJ/mol	Joback Method
hf	-35.28	kJ/mol	Joback Method
hfus	19.99	kJ/mol	Joback Method
hvap	49.29	kJ/mol	Joback Method
log10ws	-4.44		Crippen Method
logp	4.200		Crippen Method
mcvol	173.500	ml/mol	McGowan Method
pc	2377.22	kPa	Joback Method
tb	561.68	K	Joback Method
tc	785.03	K	Joback Method
tf	284.86	K	Joback Method
vc	0.652	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	430.85	J/mol×K	561.68	Joback Method
cpg	452.03	J/mol×K	598.90	Joback Method
cpg	471.83	J/mol×K	636.13	Joback Method
cpg	490.30	J/mol×K	673.35	Joback Method
cpg	507.53	J/mol×K	710.58	Joback Method

cpg	523.57	J/mol×K	747.80	Joback Method
cpg	538.50	J/mol×K	785.03	Joback Method
dvisc	0.0037806	Pa×s	284.86	Joback Method
dvisc	0.0017510	Pa×s	331.00	Joback Method
dvisc	0.0009790	Pa×s	377.13	Joback Method
dvisc	0.0006214	Pa×s	423.27	Joback Method
dvisc	0.0004312	Pa×s	469.41	Joback Method
dvisc	0.0003195	Pa×s	515.54	Joback Method
dvisc	0.0002487	Pa×s	561.68	Joback Method
hvapt	61.30	kJ/mol	456.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.96949e+01
Coeff. B	-8.01300e+03
Temperature range (K), min.	412.89
Temperature range (K), max.	557.10

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=C2883127&Units=SI

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

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