Cyclopentene,1-(2-methylpropyl)-

Other names: 1-Isobutylcyclopentene-1
Inchi: InChI=1S/C9H16/c1-8(2)7-9-5-3-4-6-9/h5,8H,3-4,6-7H2,1-2H3
InchiKey: AVBOQKCRSALLCN-UHFFFAOYSA-N
Formula: C9H16
SMILES: CC(C)CC1=CCCC1
Mol. weight [g/mol]: 124.22
CAS: 53098-47-8

Physical Properties

Property code	Value	Unit	Source
gf	87.05	kJ/mol	Joback Method
hf	-107.24	kJ/mol	Joback Method
hfus	9.24	kJ/mol	Joback Method
hvap	36.76	kJ/mol	Joback Method
ie	8.44 ± 0.01	eV	NIST Webbook
log10ws	-3.10		Crippen Method
logp	3.143		Crippen Method
mcvol	122.510	ml/mol	McGowan Method
pc	2953.69	kPa	Joback Method
rinpol	892.00		NIST Webbook
rinpol	892.00		NIST Webbook
rinpol	885.40		NIST Webbook
rinpol	889.20		NIST Webbook
rinpol	885.00		NIST Webbook
rinpol	889.00		NIST Webbook
rinpol	892.00		NIST Webbook
ripol	1002.60		NIST Webbook
ripol	988.30		NIST Webbook
ripol	1003.00		NIST Webbook
ripol	988.00		NIST Webbook
ripol	997.00		NIST Webbook
ripol	1003.00		NIST Webbook
ripol	996.40		NIST Webbook
ripol	1002.60		NIST Webbook
ripol	988.30		NIST Webbook
ripol	996.40		NIST Webbook
tb	428.97	K	Joback Method

tc	628.54	K	Joback Method
tf	204.61	K	Joback Method
vc	0.462	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	243.92	J/mol×K	428.97	Joback Method
cpg	316.19	J/mol×K	595.28	Joback Method
cpg	303.27	J/mol×K	562.02	Joback Method
cpg	289.61	J/mol×K	528.76	Joback Method
cpg	275.19	J/mol×K	495.49	Joback Method
cpg	259.97	J/mol×K	462.23	Joback Method
cpg	328.41	J/mol×K	628.54	Joback Method
dvisc	0.0002748	Pa×s	428.97	Joback Method
dvisc	0.0003595	Pa×s	391.58	Joback Method
dvisc	0.0004978	Pa×s	354.18	Joback Method
dvisc	0.0007444	Pa×s	316.79	Joback Method
dvisc	0.0012397	Pa×s	279.40	Joback Method
dvisc	0.0024170	Pa×s	242.00	Joback Method
dvisc	0.0060147	Pa×s	204.61	Joback Method

Sources

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=C53098478&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

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
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume