Cyclopentane, (1-methylpropyl)-

Other names: (1-methylpropyl)cyclopentane
Inchi: InChI=1S/C9H18/c1-3-8(2)9-6-4-5-7-9/h8-9H,3-7H2,1-2H3
InchiKey: DCEHVBLXWODXCW-UHFFFAOYSA-N
Formula: C9H18
SMILES: CCC(C)C1CCCC1
Mol. weight [g/mol]: 126.24
CAS: 4850-32-2

Physical Properties

Property code	Value	Unit	Source
gf	59.01	kJ/mol	Joback Method
hf	-173.89	kJ/mol	Joback Method
hfus	9.48	kJ/mol	Joback Method
hvap	35.50	kJ/mol	Joback Method
log10ws	-3.00		Crippen Method
logp	3.223		Crippen Method
mcvol	126.810	ml/mol	McGowan Method
pc	2787.66	kPa	Joback Method
rinpol	932.00		NIST Webbook
rinpol	922.00		NIST Webbook
rinpol	938.00		NIST Webbook
rinpol	932.00		NIST Webbook
rinpol	927.00		NIST Webbook
tb	427.70 ± 1.00	K	NIST Webbook
tb	427.55 ± 0.30	K	NIST Webbook
tb	427.60 ± 1.00	K	NIST Webbook
tc	615.83	K	Joback Method
tf	187.09	K	Joback Method
vc	0.474	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	255.93	J/mol×K	420.16	Joback Method

cpg	273.96	J/mol×K	452.77	Joback Method
cpg	291.11	J/mol×K	485.38	Joback Method
cpg	307.42	J/mol×K	518.00	Joback Method
cpg	322.90	J/mol×K	550.61	Joback Method
cpg	337.58	J/mol×K	583.22	Joback Method
cpg	351.50	J/mol×K	615.83	Joback Method
dvisc	0.0079071	Pa×s	187.09	Joback Method
dvisc	0.0028600	Pa×s	225.94	Joback Method
dvisc	0.0013941	Pa×s	264.78	Joback Method
dvisc	0.0008168	Pa×s	303.62	Joback Method
dvisc	0.0005402	Pa×s	342.47	Joback Method
dvisc	0.0003887	Pa×s	381.31	Joback Method
dvisc	0.0002972	Pa×s	420.16	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C4850322&Units=SI
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

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

vc: Critical Volume

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