Cyclopentane, 1-butyl-2-methyl, trans

Other names: trans-1-Butyl-2-methylcyclopentane
Inchi: InChI=1S/C10H20/c1-3-4-7-10-8-5-6-9(10)2/h9-10H,3-8H2,1-2H3/t9-,10-/m0/s1
InchiKey: CBGQSQYVGVKUCW-UWVGGRQHSA-N
Formula: C10H20
SMILES: CCCCC1CCCC1C
Mol. weight [g/mol]: 140.27

Physical Properties

Property code	Value	Unit	Source
gf	62.16	kJ/mol	Joback Method
hf	-209.59	kJ/mol	Joback Method
hfus	16.66	kJ/mol	Joback Method
hvap	37.80	kJ/mol	Joback Method
log10ws	-3.42		Crippen Method
logp	3.613		Crippen Method
mcvol	140.900	ml/mol	McGowan Method
pc	2424.27	kPa	Joback Method
rinpol	991.00		NIST Webbook
rinpol	987.00		NIST Webbook
rinpol	983.00		NIST Webbook
rinpol	983.00		NIST Webbook
rinpol	991.00		NIST Webbook
rinpol	987.00		NIST Webbook
tb	438.81	K	Joback Method
tc	627.75	K	Joback Method
tf	209.12	K	Joback Method
vc	0.535	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	300.00	J/mol×K	438.81	Joback Method
cpg	385.42	J/mol×K	596.26	Joback Method
cpg	369.93	J/mol×K	564.77	Joback Method

cpg	353.67	J/mol×K	533.28	Joback Method
cpg	336.60	J/mol×K	501.79	Joback Method
cpg	318.72	J/mol×K	470.30	Joback Method
cpg	400.16	J/mol×K	627.75	Joback Method
dvisc	0.0003036	Pa×s	438.81	Joback Method
dvisc	0.0003706	Pa×s	400.53	Joback Method
dvisc	0.0004719	Pa×s	362.25	Joback Method
dvisc	0.0006360	Pa×s	323.97	Joback Method
dvisc	0.0009287	Pa×s	285.68	Joback Method
dvisc	0.0015247	Pa×s	247.40	Joback Method
dvisc	0.0030012	Pa×s	209.12	Joback Method

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=R10614&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
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