

Cyclopentane, (1-methylbutyl)-

Other names:	Pentane, 2-cyclopentyl- (1-Methylbutyl)cyclopentane
Inchi:	InChI=1S/C10H20/c1-3-6-9(2)10-7-4-5-8-10/h9-10H,3-8H2,1-2H3
InchiKey:	ZXIYMCGSSPHRBV-UHFFFAOYSA-N
Formula:	C10H20
SMILES:	CCCC(C)C1CCCC1
Mol. weight [g/mol]:	140.27
CAS:	4737-43-3

Physical Properties

Property code	Value	Unit	Source
gf	67.43	kJ/mol	Joback Method
hf	-194.53	kJ/mol	Joback Method
hfus	12.07	kJ/mol	Joback Method
hvap	37.72	kJ/mol	Joback Method
log10ws	-3.42		Crippen Method
logp	3.613		Crippen Method
mcvol	140.900	ml/mol	McGowan Method
pc	2525.19	kPa	Joback Method
rinpol	1024.00		NIST Webbook
rinpol	1019.00		NIST Webbook
rinpol	1014.00		NIST Webbook
tb	449.60 ± 0.50	K	NIST Webbook
tb	449.70 ± 0.30	K	NIST Webbook
tc	636.76	K	Joback Method
tf	198.36	K	Joback Method
vc	0.530	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	300.21	J/mol×K	443.04	Joback Method
cpg	319.15	J/mol×K	475.33	Joback Method
cpg	337.17	J/mol×K	507.61	Joback Method

cpg	354.30	J/molxK	539.90	Joback Method
cpg	370.57	J/molxK	572.19	Joback Method
cpg	386.01	J/molxK	604.47	Joback Method
cpg	400.64	J/molxK	636.76	Joback Method
dvisc	0.0082711	Paxs	198.36	Joback Method
dvisc	0.0029461	Paxs	239.14	Joback Method
dvisc	0.0014176	Paxs	279.92	Joback Method
dvisc	0.0008216	Paxs	320.70	Joback Method
dvisc	0.0005385	Paxs	361.48	Joback Method
dvisc	0.0003846	Paxs	402.26	Joback Method
dvisc	0.0002922	Paxs	443.04	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=C4737433&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
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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