Cyclopentene, 1-pentyl-

Other names:	1-Amyl-1-cyclopentene
	1-Pentyl-1-cyclopentene
	1-Pentylcyclopentene
	1-Pentylcyclopentene-1
Inchi:	InChI=1S/C10H18/c1-2-3-4-7-10-8-5-6-9-10/h8H,2-7,9H2,1H3
InchiKey:	QCNVZKGTZWZQPR-UHFFFAOYSA-N
Formula:	C10H18
SMILES:	CCCCCC1=CCCC1
Mol. weight [g/mol]:	138.25
CAS:	4291-98-9

Physical Properties

Property code	Value	Unit	Source
gf	97.91	kJ/mol	Joback Method
hf	-122.60	kJ/mol	Joback Method
hfus	15.35	kJ/mol	Joback Method
hvap	39.37	kJ/mol	Joback Method
ie	8.45 ± 0.02	eV	NIST Webbook
log10ws	-3.76		Crippen Method
logp	3.677		Crippen Method
mcvol	136.600	ml/mol	McGowan Method
pc	2646.11	kPa	Joback Method
rinpol	1054.00		NIST Webbook
rinpol	1038.00		NIST Webbook
rinpol	1034.00		NIST Webbook
rinpol	1031.00		NIST Webbook
rinpol	1034.30		NIST Webbook
rinpol	1032.00		NIST Webbook
rinpol	1031.40		NIST Webbook
rinpol	1063.00		NIST Webbook
rinpol	1060.00		NIST Webbook
rinpol	1034.00		NIST Webbook
rinpol	1037.00		NIST Webbook
rinpol	1036.00		NIST Webbook
rinpol	1037.00		NIST Webbook
rinpol	1034.00		NIST Webbook
rinpol	1040.00		NIST Webbook

rinpol	1038.00		NIST Webbook
rinpol	1032.00		NIST Webbook
ripol	1163.20		NIST Webbook
ripol	1171.40		NIST Webbook
ripol	1147.50		NIST Webbook
ripol	1159.50		NIST Webbook
ripol	1166.00		NIST Webbook
ripol	1165.60		NIST Webbook
ripol	1151.80		NIST Webbook
ripol	1160.20		NIST Webbook
ripol	1165.60		NIST Webbook
ripol	1151.80		NIST Webbook
ripol	1160.20		NIST Webbook
ripol	1114.00		NIST Webbook
ripol	1114.00		NIST Webbook
ripol	1155.40		NIST Webbook
ripol	1152.00		NIST Webbook
ripol	1148.00		NIST Webbook
ripol	1171.00		NIST Webbook
ripol	1167.00		NIST Webbook
ripol	1163.00		NIST Webbook
ripol	1160.00		NIST Webbook
ripol	1155.00		NIST Webbook
ripol	1152.00		NIST Webbook
ripol	1172.00		NIST Webbook
ripol	1169.00		NIST Webbook
ripol	1166.00		NIST Webbook
ripol	1159.00		NIST Webbook
ripol	1166.80		NIST Webbook
ripol	1151.50		NIST Webbook
ripol	1183.00		NIST Webbook
tb	452.29	K	Joback Method
tc	645.20	K	Joback Method
tf	230.88	K	Joback Method
vc	0.523	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	287.00	J/mol×K	452.29	Joback Method
cpg	303.55	J/mol×K	484.44	Joback Method

cpg	319.27	J/mol×K	516.59	Joback Method
cpg	334.20	J/mol×K	548.75	Joback Method
cpg	348.37	J/mol×K	580.90	Joback Method
cpg	361.81	J/mol×K	613.05	Joback Method
cpg	374.54	J/mol×K	645.20	Joback Method
dvisc	0.0040913	Pa×s	230.88	Joback Method
dvisc	0.0019245	Pa×s	267.78	Joback Method
dvisc	0.0010867	Pa×s	304.68	Joback Method
dvisc	0.0006943	Pa×s	341.58	Joback Method
dvisc	0.0004841	Pa×s	378.49	Joback Method
dvisc	0.0003598	Pa×s	415.39	Joback Method
dvisc	0.0002807	Pa×s	452.29	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.46876e+01
Coeff. B	-3.81315e+03
Coeff. C	-6.81600e+01
Temperature range (K), min.	332.96
Temperature range (K), max.	474.85

Sources

Joback Method:	https://en.wikipedia.org/wiki/Joback_method
KDB:	https://www.cheric.org/files/research/kdb/mol/mol649.mol
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C4291989&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
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
pvap:	Vapor 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

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