1-Pentene, 1-chloro-

Other names: 1-chloro-1-pentene
Inchi: InChI=1S/C5H9Cl/c1-2-3-4-5-6/h4-5H,2-3H2,1H3/b5-4+
InchiKey: NKNYZKFBNQUWTM-SNAWJCMRSA-N
Formula: C5H9Cl
SMILES: CCCC=CCl
Mol. weight [g/mol]: 104.58
CAS: 21450-13-5

Physical Properties

Property code	Value	Unit	Source
gf	59.51	kJ/mol	Joback Method
hf	-45.05	kJ/mol	Joback Method
hfus	13.10	kJ/mol	Joback Method
hvap	31.07	kJ/mol	Joback Method
log10ws	-2.42		Crippen Method
logp	2.539		Crippen Method
mcvol	89.250	ml/mol	McGowan Method
pc	3530.46	kPa	Joback Method
rinpol	730.00		NIST Webbook
rinpol	730.00		NIST Webbook
tb	355.39	K	Joback Method
tc	537.38	K	Joback Method
tf	170.95	K	Joback Method
vc	0.344	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	136.94	J/mol×K	355.39	Joback Method
cpg	145.66	J/mol×K	385.72	Joback Method
cpg	153.96	J/mol×K	416.05	Joback Method
cpg	161.85	J/mol×K	446.39	Joback Method
cpg	169.35	J/mol×K	476.72	Joback Method
cpg	176.47	J/mol×K	507.05	Joback Method

cpg	183.25	J/mol×K	537.38	Joback Method
dvisc	0.0039506	Pa×s	170.95	Joback Method
dvisc	0.0017260	Pa×s	201.69	Joback Method
dvisc	0.0009387	Pa×s	232.43	Joback Method
dvisc	0.0005886	Pa×s	263.17	Joback Method
dvisc	0.0004069	Pa×s	293.91	Joback Method
dvisc	0.0003017	Pa×s	324.65	Joback Method
dvisc	0.0002356	Pa×s	355.39	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.39182e+01
Coeff. B	-3.10679e+03
Coeff. C	-4.29120e+01
Temperature range (K), min.	270.84
Temperature range (K), max.	403.89

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C21450135&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

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
pvap:	Vapor pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume