1-Pentene, 5-chloro-

Other names: 5-Chloro-1-pentene
5-Chloropentene
Inchi: InChI=1S/C5H9Cl/c1-2-3-4-5-6/h2H,1,3-5H2
InchiKey: UPOBJNRMUDPATE-UHFFFAOYSA-N
Formula: C5H9Cl
SMILES: C=CCCCCl
Mol. weight [g/mol]: 104.58
CAS: 928-50-7

Physical Properties

Property code	Value	Unit	Source
gf	67.13	kJ/mol	Joback Method
hf	-36.84	kJ/mol	Joback Method
hfus	11.62	kJ/mol	Joback Method
hvap	30.44	kJ/mol	Joback Method
log10ws	-1.92		Crippen Method
logp	2.191		Crippen Method
mcvol	89.250	ml/mol	McGowan Method
pc	3488.88	kPa	Joback Method
rinpol	730.00		NIST Webbook
tb	378.00 ± 4.00	K	NIST Webbook
tc	524.08	K	Joback Method
tf	174.27	K	Joback Method
vc	0.345	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	138.09	J/mol×K	347.91	Joback Method
cpg	146.42	J/mol×K	377.27	Joback Method
cpg	154.39	J/mol×K	406.63	Joback Method
cpg	162.02	J/mol×K	436.00	Joback Method
cpg	169.31	J/mol×K	465.36	Joback Method
cpg	176.29	J/mol×K	494.72	Joback Method

cpg	182.94	J/mol×K	524.08	Joback Method
dvisc	0.0035107	Pa×s	174.27	Joback Method
dvisc	0.0017000	Pa×s	203.21	Joback Method
dvisc	0.0009863	Pa×s	232.15	Joback Method
dvisc	0.0006457	Pa×s	261.09	Joback Method
dvisc	0.0004600	Pa×s	290.03	Joback Method
dvisc	0.0003485	Pa×s	318.97	Joback Method
dvisc	0.0002765	Pa×s	347.91	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.48114e+01
Coeff. B	-3.38695e+03
Coeff. C	-4.57200e+01
Temperature range (K), min.	278.92
Temperature range (K), max.	402.24

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C928507&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

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