

1-Pentene, 2-chloro-

Other names:	2-Chloro-1-pentene
Inchi:	InChI=1S/C5H9Cl/c1-3-4-5(2)6/h2-4H2,1H3
InchiKey:	RYAVTKZLXAVVAQ-UHFFFAOYSA-N
Formula:	C5H9Cl
SMILES:	C=C(Cl)CCC
Mol. weight [g/mol]:	104.58
CAS:	42131-85-1

Physical Properties

Property code	Value	Unit	Source
gf	58.58	kJ/mol	Joback Method
hf	-46.63	kJ/mol	Joback Method
hfus	10.31	kJ/mol	Joback Method
hvap	30.52	kJ/mol	Joback Method
log10ws	-2.42		Crippen Method
logp	2.539		Crippen Method
mcvol	89.250	ml/mol	McGowan Method
pc	3509.58	kPa	Joback Method
rinpol	679.00		NIST Webbook
tb	347.79	K	Joback Method
tc	527.66	K	Joback Method
tf	160.31	K	Joback Method
vc	0.346	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	138.14	J/molxK	347.79	Joback Method
cpg	146.61	J/molxK	377.77	Joback Method
cpg	154.71	J/molxK	407.75	Joback Method
cpg	162.44	J/molxK	437.72	Joback Method
cpg	169.84	J/molxK	467.70	Joback Method
cpg	176.89	J/molxK	497.68	Joback Method
cpg	183.63	J/molxK	527.66	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.34863e+01
Coeff. B	-2.97460e+03
Coeff. C	-4.15500e+01
Temperature range (K), min.	266.92
Temperature range (K), max.	405.42

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C42131851&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/ci9903071
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
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

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