

2-Butene, 1-chloro-

Other names:	1-Chloro-2-butene 1-chlorobut-2-ene 2-Butenyl chloride Crotyl chloride «alpha»-Chloro-«beta»-butylene «gamma»-Methallyl chloride «gamma»-Methylallyl chloride Â«alphaÂ»-Chloro-Â«betaÂ»-butylene Â«gammaÂ»-Methallyl chloride Â«gammaÂ»-Methylallyl chloride
Inchi:	InChI=1S/C4H7Cl/c1-2-3-4-5/h2-3H,4H2,1H3
InchiKey:	YTKRILODNOEEXP-UHFFFAOYSA-N
Formula:	C4H7Cl
SMILES:	CC=CCCl
Mol. weight [g/mol]:	90.55
CAS:	591-97-9

Physical Properties

Property code	Value	Unit	Source
gf	51.09	kJ/mol	Joback Method
hf	-49.37	kJ/mol	NIST Webbook
hfus	10.51	kJ/mol	Joback Method
hvap	28.84	kJ/mol	Joback Method
log10ws	-1.50		Crippen Method
logp	1.801		Crippen Method
mcvol	75.160	ml/mol	McGowan Method
pc	3970.51	kPa	Joback Method
tb	357.40 ± 1.00	K	NIST Webbook
tb	357.15 ± 2.00	K	NIST Webbook
tb	357.15 ± 2.00	K	NIST Webbook
tb	357.15 ± 2.00	K	NIST Webbook
tb	356.15 ± 2.00	K	NIST Webbook
tc	514.66	K	Joback Method
tf	159.68	K	Joback Method
vc	0.288	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	104.96	J/molxK	332.51	Joback Method
cpg	112.16	J/molxK	362.87	Joback Method
cpg	118.99	J/molxK	393.23	Joback Method
cpg	125.48	J/molxK	423.59	Joback Method
cpg	131.63	J/molxK	453.95	Joback Method
cpg	137.47	J/molxK	484.30	Joback Method
cpg	143.01	J/molxK	514.66	Joback Method
dvisc	0.0033962	Paxs	159.68	Joback Method
dvisc	0.0015278	Paxs	188.49	Joback Method
dvisc	0.0008494	Paxs	217.29	Joback Method
dvisc	0.0005418	Paxs	246.09	Joback Method
dvisc	0.0003798	Paxs	274.90	Joback Method
dvisc	0.0002848	Paxs	303.70	Joback Method
dvisc	0.0002244	Paxs	332.51	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.48493e+01
Coeff. B	-3.25704e+03
Coeff. C	-3.90480e+01
Temperature range (K), min.	262.72
Temperature range (K), max.	380.54

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C591979&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

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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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