1-Chloro-2,2-difluoroethane

Other names: 2-chloro-1,1-difluoroethane
Inchi: InChI=1S/C2H3ClF2/c3-1-2(4)5/h2H,1H2
InchiKey: ATEBGNALLCMSGS-UHFFFAOYSA-N
Formula: C2H3ClF2
SMILES: FC(F)CCl
Mol. weight [g/mol]: 100.50
CAS: 338-65-8

Physical Properties

Property code	Value	Unit	Source
gf	-438.03	kJ/mol	Joback Method
hf	-497.85	kJ/mol	Joback Method
hfus	7.77	kJ/mol	Joback Method
hvap	22.41	kJ/mol	Joback Method
log10ws	-1.13		Crippen Method
logp	1.490		Crippen Method
mcvol	54.820	ml/mol	McGowan Method
pc	4277.45	kPa	Joback Method
rinpol	335.00		NIST Webbook
tb	308.25 ± 0.50	K	NIST Webbook
tc	435.18	K	Joback Method
tf	128.40	K	Joback Method
vc	0.227	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	78.62	J/mol×K	280.69	Joback Method
cpg	82.62	J/mol×K	306.44	Joback Method
cpg	86.48	J/mol×K	332.19	Joback Method
cpg	90.19	J/mol×K	357.94	Joback Method
cpg	93.76	J/mol×K	383.68	Joback Method
cpg	97.18	J/mol×K	409.43	Joback Method
cpg	100.48	J/mol×K	435.18	Joback Method

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C338658&Units=SI

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