Ethene, 2-chloro-1,1-difluoro-

Other names:	1,1-Difluoro-2-chloroethylene
	1,1-Difluorochloroethylene
	2,2-Difluoro-1-chloroethene
	2-Chloro-1,1-difluoroethylene
	CF2=CHCl
	Chloro-1,1-difluoroethylene
	Ethene, 1,1-difluoro-2-chloro
	Ethylene, 2-chloro-1,1-difluoro-
	F 1122
	FC 1122
	HCFC 1122
	R 1122
Inchi:	InChI=1S/C2HClF2/c3-1-2(4)5/h1H
InchiKey:	HTHNTJCVPNKCPZ-UHFFFAOYSA-N
Formula:	C2HClF2
SMILES:	FC(F)=CCl
Mol. weight [g/mol]:	98.48
CAS:	359-10-4

Physical Properties

Property code	Value	Unit	Source
gf	-363.92	kJ/mol	Joback Method
hf	-385.14	kJ/mol	Joback Method
hfus	10.19	kJ/mol	Joback Method
hvap	22.84	kJ/mol	Joback Method
ie	9.80 ± 0.04	eV	NIST Webbook
ie	9.84	eV	NIST Webbook
ie	9.76	eV	NIST Webbook
log10ws	-1.86		Crippen Method
logp	1.963		Crippen Method
mcvol	50.520	ml/mol	McGowan Method
pc	4460.89 ± 110.32	kPa	NIST Webbook
rhoc	499.29 ± 14.77	kg/m3	NIST Webbook
rinpol	339.00		NIST Webbook
rinpol	339.00		NIST Webbook
rinpol	339.00		NIST Webbook
tb	256.00	K	NIST Webbook

tc	400.55 ± 0.70	K	NIST Webbook
tf	124.36	K	Joback Method
vc	0.213	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	72.51	J/mol×K	339.57	Joback Method
cpg	75.67	J/mol×K	366.77	Joback Method
cpg	78.64	J/mol×K	393.97	Joback Method
cpg	81.42	J/mol×K	421.17	Joback Method
cpg	65.54	J/mol×K	285.17	Joback Method
cpg	69.13	J/mol×K	312.37	Joback Method
cpg	84.02	J/mol×K	448.37	Joback Method
hvapt	23.50	kJ/mol	233.00	NIST Webbook
hvapt	21.40	kJ/mol	273.00	NIST Webbook
hvapt	18.50	kJ/mol	313.00	NIST Webbook
hvapt	14.10	kJ/mol	353.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.43503e+01
Coeff. B	-2.23329e+03
Coeff. C	-2.50700e+01
Temperature range (K), min.	183.88
Temperature range (K), max.	400.55

Sources

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

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C359104&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
KDB:	https://www.cheric.org/files/research/kdb/mol/mol1717.mol

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
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
rhoc:	Critical density
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume