

1,2-dichloro-1,2-difluoroethane

Inchi:	InChI=1S/C2H2Cl2F2/c3-1(5)2(4)6/h1-2H
InchiKey:	IDSKMUOSMAUASS-UHFFFAOYSA-N
Formula:	C2H2Cl2F2
SMILES:	FC(Cl)C(F)Cl
Mol. weight [g/mol]:	134.94
CAS:	431-06-1

Physical Properties

Property code	Value	Unit	Source
gf	-452.40	kJ/mol	Joback Method
hf	-518.87	kJ/mol	Joback Method
hfus	8.44	kJ/mol	Joback Method
hvap	26.41	kJ/mol	Joback Method
log10ws	-1.89		Crippen Method
logp	2.055		Crippen Method
mvol	67.060	ml/mol	McGowan Method
pc	4119.70	kPa	Joback Method
sl	253.01	J/molxK	NIST Webbook
tb	317.68	K	Joback Method
tc	487.57	K	Joback Method
tf	143.32	K	Joback Method
vc	0.270	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	116.33	J/molxK	459.25	Joback Method
cpg	97.46	J/molxK	317.68	Joback Method
cpg	101.61	J/molxK	345.99	Joback Method
cpg	105.57	J/molxK	374.31	Joback Method
cpg	109.34	J/molxK	402.62	Joback Method
cpg	112.93	J/molxK	430.94	Joback Method
cpg	119.56	J/molxK	487.57	Joback Method
cpl	151.49	J/molxK	298.15	NIST Webbook

hfust	8.19	kJ/mol	162.99	NIST Webbook
sfust	50.30	J/mol×K	162.99	NIST Webbook

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C431061&Units=SI&Mask=3FFF
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
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

Legend

cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hfust:	Enthalpy of fusion at a given temperature
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
sfust:	Entropy of fusion at a given temperature
sl:	Liquid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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