Ethane, 1,1,2-trichloro-1,2-difluoro-

Other names: 1,2-Difluoro-1,1,2-trichloroethane
Inchi: InChI=1S/C2HCl3F2/c3-1(6)2(4,5)7/h1H
InchiKey: BQNSLJQRJAJITR-UHFFFAOYSA-N
Formula: C2HCl3F2
SMILES: FC(Cl)C(F)(Cl)Cl
Mol. weight [g/mol]: 169.38
CAS: 354-15-4

Physical Properties

Property code	Value	Unit	Source
gf	-459.05	kJ/mol	Joback Method
hf	-538.08	kJ/mol	Joback Method
hfus	8.75	kJ/mol	Joback Method
hvap	33.10 ± 0.10	kJ/mol	NIST Webbook
hvap	33.00 ± 0.40	kJ/mol	NIST Webbook
log10ws	-2.54		Crippen Method
logp	2.622		Crippen Method
mcvol	79.300	ml/mol	McGowan Method
pc	3985.56	kPa	Joback Method
tb	352.32	K	Joback Method
tc	540.19	K	Joback Method
tf	190.66	K	Joback Method
tt	99.00 ± 2.00	K	NIST Webbook
vc	0.314	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	117.35	J/mol×K	352.32	Joback Method
cpg	122.32	J/mol×K	383.63	Joback Method
cpg	126.87	J/mol×K	414.94	Joback Method
cpg	131.02	J/mol×K	446.26	Joback Method
cpg	134.80	J/mol×K	477.57	Joback Method
cpg	138.23	J/mol×K	508.88	Joback Method

cpg	141.33	J/mol×K	540.19	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C354154&Units=SI
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

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