Ethyne, difluoro-

Other names:	Acetylene, difluoro-
	Difluoroacetylene
	FC«equiv»CF
	Difluoroethyne
	C2F2
Inchi:	InChI=1S/C2F2/c3-1-2-4
InchiKey:	BWTZYYGAOGUPFQ-UHFFFAOYSA-N
Formula:	C2F2
SMILES:	FC#CF
Mol. weight [g/mol]:	62.02
CAS:	689-99-6

Physical Properties

Property code	Value	Unit	Source
gf	-220.86	kJ/mol	Joback Method
hf	-190.00 ± 30.00	kJ/mol	NIST Webbook
hfus	10.22	kJ/mol	Joback Method
hvap	20.56	kJ/mol	Joback Method
ie	11.18	eV	NIST Webbook
ie	11.18	eV	NIST Webbook
ie	11.40 ± 0.50	eV	NIST Webbook
log10ws	-1.15		Crippen Method
logp	0.844		Crippen Method
mcvol	33.980	ml/mol	McGowan Method
pc	5569.17	kPa	Joback Method
tb	252.70	K	Joback Method
tc	415.22	K	Joback Method
tf	219.58	K	Joback Method
vc	0.145	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	46.30	J/mol×K	252.70	Joback Method

cpg	47.78	J/mol×K	279.79	Joback Method
cpg	49.22	J/mol×K	306.87	Joback Method
cpg	50.63	J/mol×K	333.96	Joback Method
cpg	52.00	J/mol×K	361.05	Joback Method
cpg	53.34	J/mol×K	388.13	Joback Method
cpg	54.65	J/mol×K	415.22	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C689996&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

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
ie:	Ionization energy
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
vc:	Critical Volume