[2H]hydrogen fluoride

Other names: Hydrofluoric acid-d
Inchi: InChI=1S/FH/h1H/i/hD
InchiKey: KRHYYFGTRYWZRS-DYCDLGHISA-N
Formula: DF
SMILES: F
Mol. weight [g/mol]: 21.01
CAS: 14333-26-7

Physical Properties

Property code	Value	Unit	Source
gf	-193.31	kJ/mol	Joback Method
hf	-183.63	kJ/mol	Joback Method
hfus	0.52	kJ/mol	Joback Method
hvap	14.63	kJ/mol	Joback Method
ie	16.05 ± 0.01	eV	NIST Webbook
ie	16.03 ± 0.01	eV	NIST Webbook
ie	16.06 ± 0.00	eV	NIST Webbook
ie	16.06 ± 0.01	eV	NIST Webbook
ie	16.06	eV	NIST Webbook
log10ws	0.14		Crippen Method
logp	0.153		Crippen Method
mcvol	12.630	ml/mol	McGowan Method
pc	6389.77	kPa	Joback Method
tb	197.97	K	Joback Method
tc	332.95	K	Joback Method
tf	106.72	K	Joback Method
vc	0.044	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	5.03	J/mol×K	197.97	Joback Method
cpg	6.12	J/mol×K	220.47	Joback Method
cpg	7.08	J/mol×K	242.96	Joback Method

cpg	7.91	J/mol×K	265.46	Joback Method
cpg	8.63	J/mol×K	287.96	Joback Method
cpg	9.23	J/mol×K	310.46	Joback Method
cpg	9.72	J/mol×K	332.95	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C14333267&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
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