Iodine monofluoride

Inchi: InChI=1S/FI/c1-2
InchiKey: PDJAZCSYYQODQF-UHFFFAOYSA-N
Formula: FI
SMILES: FI
Mol. weight [g/mol]: 145.90
CAS: 13873-84-2

Physical Properties

Property code	Value	Unit	Source
ea	1.00 ± 0.19	eV	NIST Webbook
ea	2.61	eV	NIST Webbook
gf	-187.57	kJ/mol	Joback Method
hf	-162.57	kJ/mol	Joback Method
hfus	3.24	kJ/mol	Joback Method
hvap	24.15	kJ/mol	Joback Method
ie	10.54 ± 0.01	eV	NIST Webbook
ie	10.50 ± 0.30	eV	NIST Webbook
ie	10.62	eV	NIST Webbook
ie	10.54 ± 0.01	eV	NIST Webbook
log10ws	-1.61		Crippen Method
logp	1.306		Crippen Method
mcvol	38.450	ml/mol	McGowan Method
pc	6056.11	kPa	Joback Method
tb	291.81	K	Joback Method
tc	485.58	K	Joback Method
tf	148.41	K	Joback Method
vc	0.141	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	31.15	J/mol×K	291.81	Joback Method
cpg	31.76	J/mol×K	324.10	Joback Method
cpg	32.28	J/mol×K	356.40	Joback Method

cpg	32.73	J/mol×K	388.69	Joback Method
cpg	33.10	J/mol×K	420.99	Joback Method
cpg	33.41	J/mol×K	453.28	Joback Method
cpg	33.66	J/mol×K	485.58	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C13873842&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
ea:	Electron affinity
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

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