35Chlorine monofluoride

Inchi: InChI=1S/ClF/c1-2/i1+0
InchiKey: OMRRUNXAWXNVFW-IGMARMGPSA-N
Formula: ClF
SMILES: FCl
Mol. weight [g/mol]: 54.45
CAS: 21377-80-0

Physical Properties

Property code	Value	Unit	Source
gf	-257.62	kJ/mol	Joback Method
hf	-255.18	kJ/mol	Joback Method
hfus	3.03	kJ/mol	Joback Method
hvap	19.16	kJ/mol	Joback Method
ie	12.60 ± 0.05	eV	NIST Webbook
log10ws	-0.82		Crippen Method
logp	1.110		Crippen Method
mcvol	24.870	ml/mol	McGowan Method
pc	5917.16	kPa	Joback Method
tb	236.10	K	Joback Method
tc	390.65	K	Joback Method
tf	120.27	K	Joback Method
vc	0.102	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	26.48	J/mol×K	236.10	Joback Method
cpg	26.91	J/mol×K	261.86	Joback Method
cpg	27.32	J/mol×K	287.62	Joback Method
cpg	27.72	J/mol×K	313.37	Joback Method
cpg	28.10	J/mol×K	339.13	Joback Method
cpg	28.48	J/mol×K	364.89	Joback Method
cpg	28.84	J/mol×K	390.65	Joback Method

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C21377800&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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