Methyl hypofluorite

Inchi: InChI=1S/CH3FO/c1-3-2/h1H3
InchiKey: XMSZANIMCDLNKA-UHFFFAOYSA-N
Formula: CH3FO
SMILES: COF
Mol. weight [g/mol]: 50.03
CAS: 36336-08-0

Physical Properties

Property code	Value	Unit	Source
basg	664.25 ± 16.25	kJ/mol	NIST Webbook
gf	-342.27	kJ/mol	Joback Method
hf	-96.00 ± 3.00	kJ/mol	NIST Webbook
hfus	2.61	kJ/mol	Joback Method
hvap	19.41	kJ/mol	Joback Method
ie	11.34 ± 0.01	eV	NIST Webbook
log10ws	-0.17		Crippen Method
logp	0.517		Crippen Method
mcvol	32.590	ml/mol	McGowan Method
pc	5281.57	kPa	Joback Method
tb	243.97	K	Joback Method
tc	391.75	K	Joback Method
tf	123.85	K	Joback Method
vc	0.128	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	48.24	J/mol×K	243.97	Joback Method
cpg	49.98	J/mol×K	268.60	Joback Method
cpg	51.76	J/mol×K	293.23	Joback Method
cpg	53.55	J/mol×K	317.86	Joback Method
cpg	55.37	J/mol×K	342.49	Joback Method
cpg	57.20	J/mol×K	367.12	Joback Method
cpg	59.05	J/mol×K	391.75	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C36336080&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

basg:	Gas basicity
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