Methanesulfinyl fluoride, trifluoro-

Other names:	Trifluoromethanesulfinyl fluoride
	Trifluoromethylsulfinyl fluoride
Inchi:	InChI=1S/CF4OS/c2-1(3,4)7(5)6
InchiKey:	OVRZXQJRDBWYNI-UHFFFAOYSA-N
Formula:	CF4OS
SMILES:	O=S(F)C(F)(F)F
Mol. weight [g/mol]:	136.07
CAS:	812-12-4

Physical Properties

Property code	Value	Unit	Source
gf	-1036.57	kJ/mol	Joback Method
hf	-1062.90	kJ/mol	Joback Method
hfus	11.01	kJ/mol	Joback Method
hvap	25.98	kJ/mol	Joback Method
log10ws	-0.88		Crippen Method
logp	1.139		Crippen Method
mcvol	54.250	ml/mol	McGowan Method
pc	5183.17	kPa	Joback Method
tb	274.41	K	Joback Method
tc	420.47	K	Joback Method
tf	142.29	K	Joback Method
vc	0.242	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	91.54	J/mol×K	274.41	Joback Method
cpg	95.79	J/mol×K	298.75	Joback Method
cpg	99.85	J/mol×K	323.10	Joback Method
cpg	103.70	J/mol×K	347.44	Joback Method
cpg	107.36	J/mol×K	371.79	Joback Method
cpg	110.83	J/mol×K	396.13	Joback Method
cpg	114.12	J/mol×K	420.47	Joback Method

Sources

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=C812124&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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
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