Octafluoromethanetetramine

Other names: Tetrakis(difluoroamino)methane
Inchi: InChI=1S/CF8N4/c2-10(3)1(11(4)5,12(6)7)13(8)9
InchiKey: PIFUGZAQQQLFAA-UHFFFAOYSA-N
Formula: CF8N4
SMILES: FN(F)C(N(F)F)(N(F)F)N(F)F
Mol. weight [g/mol]: 220.02
CAS: 17125-65-4

Physical Properties

Property code	Value	Unit	Source
gf	-1154.98	kJ/mol	Joback Method
hf	1.50 ± 5.60	kJ/mol	NIST Webbook
hfus	27.66	kJ/mol	Joback Method
hvap	18.16	kJ/mol	Joback Method
log10ws	-2.87		Crippen Method
logp	1.882		Crippen Method
mcvol	79.030	ml/mol	McGowan Method
pc	3615.89	kPa	Joback Method
tb	262.97	K	Joback Method
tc	367.90	K	Joback Method
tf	238.05	K	Joback Method
vc	0.296	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	148.32	J/mol×K	262.97	Joback Method
cpg	156.15	J/mol×K	280.46	Joback Method
cpg	163.64	J/mol×K	297.95	Joback Method
cpg	170.80	J/mol×K	315.43	Joback Method
cpg	177.62	J/mol×K	332.92	Joback Method
cpg	184.14	J/mol×K	350.41	Joback Method
cpg	190.34	J/mol×K	367.90	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C17125654&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

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