cis-Tetrafluoro(trifluoromethoxy)(trifluoromethylh

Other names: (Trifluoromethoxy)[(trifluoromethyl)dioxy] sulfur tetrafluoride
Inchi: InChI=1S/C2F10O3S/c3-1(4,5)13-15-16(9,10,11,12)14-2(6,7)8
InchiKey: JBZOOMYUOIBVAY-UHFFFAOYSA-N
Formula: C2F10O3S
SMILES: FC(F)(F)OOS(F)(F)(F)(F)OC(F)(F)F
Mol. weight [g/mol]: 294.07
CAS: 41938-43-6

Physical Properties

Property code	Value	Unit	Source
gf	-2467.86	kJ/mol	Joback Method
hf	-2641.24	kJ/mol	Joback Method
hfus	17.87	kJ/mol	Joback Method
hvap	23.92	kJ/mol	Joback Method
log10ws	-4.70		Crippen Method
logp	4.235		Crippen Method
mcvol	99.300	ml/mol	McGowan Method
pc	2421.88	kPa	Joback Method
tb	370.24	K	Joback Method
tc	507.66	K	Joback Method
tf	158.65	K	Joback Method
vc	0.450	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	265.57	J/mol×K	484.76	Joback Method
cpg	237.04	J/mol×K	370.24	Joback Method
cpg	242.55	J/mol×K	393.14	Joback Method
cpg	248.18	J/mol×K	416.05	Joback Method
cpg	253.92	J/mol×K	438.95	Joback Method
cpg	259.73	J/mol×K	461.85	Joback Method
cpg	271.42	J/mol×K	507.66	Joback Method
hvapt	32.50	kJ/mol	286.00	NIST Webbook

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C41938436&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
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
hvapt:	Enthalpy of vaporization at a given temperature
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