2,3,5,7-Tetrathiaoctane 3,3-dioxide

Inchi: InChI=1S/C4H10O2S4/c1-7-3-9-4-10(5,6)8-2/h3-4H2,1-2H3
InchiKey: QBQGPZFZTUTTCS-UHFFFAOYSA-N
Formula: C4H10O2S4
SMILES: CSCSCS(=O)(=O)SC
Mol. weight [g/mol]: 218.38
CAS: 450365-65-8

Physical Properties

Property code	Value	Unit	Source
gf	-386.38	kJ/mol	Joback Method
hf	-453.63	kJ/mol	Joback Method
hfus	29.88	kJ/mol	Joback Method
hvap	63.58	kJ/mol	Joback Method
log10ws	-1.96		Crippen Method
logp	1.690		Crippen Method
mcvol	144.360	ml/mol	McGowan Method
pc	5131.32	kPa	Joback Method
rinpol	1783.80		NIST Webbook
rinpol	1783.80		NIST Webbook
tb	545.04	K	Joback Method
tc	777.52	K	Joback Method
tf	276.60	K	Joback Method
vc	0.547	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	289.63	J/mol×K	545.04	Joback Method
cpg	300.76	J/mol×K	583.79	Joback Method
cpg	311.29	J/mol×K	622.53	Joback Method
cpg	321.18	J/mol×K	661.28	Joback Method
cpg	330.40	J/mol×K	700.02	Joback Method
cpg	338.90	J/mol×K	738.77	Joback Method
cpg	346.65	J/mol×K	777.52	Joback Method

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C450365658&Units=SI

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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume