Ethanedithioamide, N,N'-dimethyl-

Other names:	Oxamide, N,N'-dimethyldithio-
	N,N'-Dimethyldithiooxamide
	CH3NHCSCSNHCH3
	USAF mk-4
Inchi:	InChI=1S/C4H8N2S2/c1-5-3(7)4(8)6-2/h1-2H3,(H,5,7)(H,6,8)
InchiKey:	MQLIZYQZJMPNFI-UHFFFAOYSA-N
Formula:	C4H8N2S2
SMILES:	CNC(=S)C(=S)NC
Mol. weight [g/mol]:	148.25
CAS:	120-79-6

Physical Properties

Property code	Value	Unit	Source
gf	395.70	kJ/mol	Joback Method
hf	274.05	kJ/mol	Joback Method
hfus	25.52	kJ/mol	Joback Method
hvap	50.83	kJ/mol	Joback Method
ie	8.23	eV	NIST Webbook
log10ws	-1.58		Crippen Method
logp	0.080		Crippen Method
mcvol	111.280	ml/mol	McGowan Method
pc	5160.85	kPa	Joback Method
tb	531.34	K	Joback Method
tc	763.82	K	Joback Method
tf	308.70	K	Joback Method
vc	0.402	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	219.74	J/mol×K	531.34	Joback Method
cpg	227.91	J/mol×K	570.09	Joback Method
cpg	235.33	J/mol×K	608.83	Joback Method
cpg	242.09	J/mol×K	647.58	Joback Method

cpg	248.28	J/mol×K	686.33	Joback Method
cpg	254.00	J/mol×K	725.08	Joback Method
cpg	259.35	J/mol×K	763.82	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=C120796&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
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