Ethene, (methylsulfinyl)-

Other names:	Sulfoxide, methyl vinyl
	Methyl vinyl sulfoxide
Inchi:	InChI=1S/C3H6OS/c1-3-5(2)4/h3H,1H2,2H3
InchiKey:	UDDBCWCQRQREBI-UHFFFAOYSA-N
Formula:	C3H6OS
SMILES:	C=CS(C)=O
Mol. weight [g/mol]:	90.14
CAS:	10258-86-3

Physical Properties

Property code	Value	Unit	Source
gf	-155.49	kJ/mol	Joback Method
hf	-185.56	kJ/mol	Joback Method
hfus	10.00	kJ/mol	Joback Method
hvap	34.33	kJ/mol	Joback Method
ie	9.02	eV	NIST Webbook
log10ws	-0.06		Crippen Method
logp	0.508		Crippen Method
mcvol	71.050	ml/mol	McGowan Method
pc	5266.25	kPa	Joback Method
tb	323.00	K	Joback Method
tc	503.05	K	Joback Method
tf	158.29	K	Joback Method
vc	0.275	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	103.41	J/mol×K	323.00	Joback Method
cpg	109.64	J/mol×K	353.01	Joback Method
cpg	115.67	J/mol×K	383.02	Joback Method
cpg	121.49	J/mol×K	413.03	Joback Method
cpg	127.11	J/mol×K	443.03	Joback Method
cpg	132.52	J/mol×K	473.04	Joback Method

cpg	137.73	J/mol×K	503.05	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=C10258863&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

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