N,N-Dimethylethanesulfonamide

Other names: Ethanesulfonamide, N,N-dimethyl-
N,N-dimethylethanesulphonamide
Inchi: InChI=1S/C4H11NO2S/c1-4-8(6,7)5(2)3/h4H2,1-3H3
InchiKey: MORLSCQKZAPYFM-UHFFFAOYSA-N
Formula: C4H11NO2S
SMILES: CCS(=O)(=O)N(C)C
Mol. weight [g/mol]: 137.20
CAS: 6338-68-7

Physical Properties

Property code	Value	Unit	Source
gf	-374.96	kJ/mol	Joback Method
hf	-511.71	kJ/mol	Joback Method
hfus	20.52	kJ/mol	Joback Method
hvap	45.18	kJ/mol	Joback Method
log10ws	0.11		Crippen Method
logp	-0.102		Crippen Method
mcvol	105.290	ml/mol	McGowan Method
pc	4762.81	kPa	Joback Method
tb	513.00	K	NIST Webbook
tc	513.08	K	Joback Method
tf	205.87	K	Joback Method
vc	0.404	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	182.66	J/mol×K	351.14	Joback Method
cpg	192.64	J/mol×K	378.13	Joback Method
cpg	202.30	J/mol×K	405.12	Joback Method
cpg	211.62	J/mol×K	432.11	Joback Method
cpg	220.61	J/mol×K	459.10	Joback Method
cpg	229.26	J/mol×K	486.09	Joback Method
cpg	237.60	J/mol×K	513.08	Joback Method

hvapt	54.30	kJ/mol	450.50	NIST Webbook

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=C6338687&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
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