1-Dimethylamino-2-nitroethylene

Other names: 1-(Dimethylamino)-2-nitroethene
Inchi: InChI=1S/C4H8N2O2/c1-5(2)3-4-6(7)8/h3-4H,1-2H3/b4-3+
InchiKey: JKOVQYWMFZTKMX-ONEGZZNKSA-N
Formula: C4H8N2O2
SMILES: CN(C)C=C[N+](=O)[O-]
Mol. weight [g/mol]: 116.12
CAS: 1190-92-7

Physical Properties

Property code	Value	Unit	Source
gf	209.35	kJ/mol	Joback Method
hf	48.10	kJ/mol	Joback Method
hfus	20.70	kJ/mol	Joback Method
hvap	43.09	kJ/mol	Joback Method
log10ws	-1.00		Crippen Method
logp	0.296		Crippen Method
mcvol	90.320	ml/mol	McGowan Method
pc	4216.56	kPa	Joback Method
tb	459.36	K	Joback Method
tc	674.09	K	Joback Method
tf	305.84	K	Joback Method
vc	0.340	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	182.72	J/mol×K	459.36	Joback Method
cpg	192.61	J/mol×K	495.15	Joback Method
cpg	201.83	J/mol×K	530.94	Joback Method
cpg	210.42	J/mol×K	566.72	Joback Method
cpg	218.43	J/mol×K	602.51	Joback Method
cpg	225.90	J/mol×K	638.30	Joback Method
cpg	232.85	J/mol×K	674.09	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1190927&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
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