Nitroguanidine

Other names:	Guanidine, nitro-
	«alpha»-Nitroguanidine
	«beta»-Nitroguanidine
	N''-Nitroguanidine
	Picrite
	1-Nitroguanidine
	Guanidine, 1-nitro-
	Guanidine, 1-nitro- (wet)
	Nitroguanidine, wet
	N1-Nitroguanidine
	Picrite (the explosive)
	2-Nitroguanidine
	Guanidine, N-nitro-
	NSC 41036
Inchi:	InChI=1S/CH4N4O2/c2-1(3)4-5(6)7/h(H4,2,3,4)
InchiKey:	IDCPFAYURAQKDZ-UHFFFAOYSA-N
Formula:	CH4N4O2
SMILES:	NC(N)=N[N+](=O)[O-]
Mol. weight [g/mol]:	104.07
CAS:	556-88-7

Physical Properties

Property code	Value	Unit	Source
chs	-876.00	kJ/mol	NIST Webbook
chs	-868.20 ± 4.20	kJ/mol	NIST Webbook
chs	-866.90	kJ/mol	NIST Webbook
chs	-878.60	kJ/mol	NIST Webbook
chs	-896.20	kJ/mol	NIST Webbook
chs	-872.80	kJ/mol	NIST Webbook
chs	-879.00 ± 2.50	kJ/mol	NIST Webbook
hf	65.28	kJ/mol	Joback Method
hfs	-97.90 ± 4.20	kJ/mol	NIST Webbook
hfs	-89.10	kJ/mol	NIST Webbook
hfs	-86.60 ± 2.50	kJ/mol	NIST Webbook
hsub	142.70 ± 2.00	kJ/mol	NIST Webbook
hvap	59.09	kJ/mol	Joback Method
log10ws	-0.34		Crippen Method

logp	-1.548		Crippen Method
mcvol	68.010	ml/mol	McGowan Method
pc	6027.93	kPa	Joback Method
tb	595.74	K	Joback Method
tc	860.65	K	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cps	129.30	J/mol×K	298.00	NIST Webbook

Sources

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=C556887&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

Legend

chs: Standard solid enthalpy of combustion
cps: Solid phase heat capacity
hf: Enthalpy of formation at standard conditions
hfs: Solid phase enthalpy of formation at standard conditions
hsub: Enthalpy of sublimation 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

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