Tetramethylhydrazine

Other names:	(CH3)2NN(CH3)2
	Hydrazine, tetramethyl-
Inchi:	InChI=1S/C4H12N2/c1-5(2)6(3)4/h1-4H3
InchiKey:	DHBZRQXIRAEMRO-UHFFFAOYSA-N
Formula:	C4H12N2
SMILES:	CN(C)N(C)C
Mol. weight [g/mol]:	88.15
CAS:	6415-12-9

Physical Properties

Property code	Value	Unit	Source
affp	948.70	kJ/mol	NIST Webbook
basg	917.90	kJ/mol	NIST Webbook
gf	204.36	kJ/mol	Joback Method
hf	9.17	kJ/mol	Joback Method
hfus	12.16	kJ/mol	Joback Method
hvap	28.58	kJ/mol	Joback Method
ie	8.38	eV	NIST Webbook
ie	6.87 ± 0.05	eV	NIST Webbook
ie	6.77 ± 0.05	eV	NIST Webbook
ie	7.93	eV	NIST Webbook
ie	7.76 ± 0.05	eV	NIST Webbook
ie	8.50	eV	NIST Webbook
ie	8.27	eV	NIST Webbook
ie	8.43	eV	NIST Webbook
ie	8.55	eV	NIST Webbook
ie	8.27	eV	NIST Webbook
ie	8.27	eV	NIST Webbook
log10ws	0.37		Crippen Method
logp	0.025		Crippen Method
mcvol	87.180	ml/mol	McGowan Method
pc	3877.12	kPa	Joback Method
rinpol	614.00		NIST Webbook
rinpol	614.00		NIST Webbook
tb	315.80	K	Joback Method
tc	476.39	K	Joback Method
tf	199.78	K	Joback Method

vc	0.295	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	139.07	J/mol×K	315.80	Joback Method
cpg	149.56	J/mol×K	342.56	Joback Method
cpg	159.62	J/mol×K	369.33	Joback Method
cpg	169.25	J/mol×K	396.09	Joback Method
cpg	178.47	J/mol×K	422.86	Joback Method
cpg	187.29	J/mol×K	449.62	Joback Method
cpg	195.73	J/mol×K	476.39	Joback Method
hvapt	32.90	kJ/mol	318.00	NIST Webbook

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C6415129&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

Legend

affp: Proton affinity
basg: Gas basicity
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
ie: Ionization energy
log10ws: Log10 of Water solubility in mol/l
logp: Octanol/Water partition coefficient

mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume