1,4-Butanediamine, N,N,N',N'-tetramethyl-

Other names:	(CH3)2N(CH2)4N(CH3)2
	1,4-Bis(dimethylamino)butane
	1,4-Butanediamine, N1,N1,N4,N4-tetramethyl-
	2,7-Dimethyl-2,7-diazaoctane
	N,N,N',N'-Tetramethyl-1,4-butanediamine
	N,N,N',N'-Tetramethyl-1,4-diaminobutane
	N,N,N',N'-Tetramethylbutylenediamine
	N,N,N',N'-Tetramethyltetramethylenediamine
	Tetramethyldiaminobutane
	Tetramethylputrescine
	«alpha»,«delta»-(Tetramethyldiamino)butane
	Â«alphaÂ»,Â«deltaÂ»-(Tetramethyldiamino)butane
Inchi:	InChI=1S/C8H20N2/c1-9(2)7-5-6-8-10(3)4/h5-8H2,1-4H3
InchiKey:	VEAZEPMQWHPHAG-UHFFFAOYSA-N
Formula:	C8H20N2
SMILES:	CN(C)CCCCN(C)C
Mol. weight [g/mol]:	144.26
CAS:	111-51-3

Physical Properties

Property code	Value	Unit	Source
affp	1046.30	kJ/mol	NIST Webbook
basg	992.70	kJ/mol	NIST Webbook
gf	238.04	kJ/mol	Joback Method
hf	-73.39	kJ/mol	Joback Method
hfus	22.52	kJ/mol	Joback Method
hvap	37.49	kJ/mol	Joback Method
log10ws	-0.31		Crippen Method
logp	0.890		Crippen Method
mcvol	143.540	ml/mol	McGowan Method
pc	2525.19	kPa	Joback Method
tb	439.70	K	NIST Webbook
tc	568.48	K	Joback Method
tf	244.86	K	Joback Method
vc	0.519	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	291.42	J/mol×K	407.32	Joback Method
cpg	306.48	J/mol×K	434.18	Joback Method
cpg	320.91	J/mol×K	461.04	Joback Method
cpg	334.74	J/mol×K	487.90	Joback Method
cpg	347.98	J/mol×K	514.76	Joback Method
cpg	360.66	J/mol×K	541.62	Joback Method
cpg	372.80	J/mol×K	568.48	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.58246e+01
Coeff. B	-4.21255e+03
Coeff. C	-6.37900e+01
Temperature range (K), min.	325.15
Temperature range (K), max.	464.48

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C111513&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume