1,3-Butanediamine, N,N,N',N'-tetramethyl-

Other names:	1,3-Bis(dimethylamino)butane
	1,3-Butanediamine, N1,N1,N3,N3-tetramethyl-
	1,3-Diaminobutane, N,N,N',N'-tetramethyl-
	N,N,N',N''-Tetramethylbutane-1,3-diamine
	N,N,N',N',1-pentamethyltrimethylenediamine
	N,N,N',N'-Tetramethyl-1,3-butanediamine
	N,N,N',N'-Tetramethyl-1,3-diaminobutane
	N,N,N',N'-Tetramethylbutane-1,3-diamine
	N,N,N1,N1-Tetramethyl-1,3-diaminobutane
	NSC 35411
	Tetramethylbutane-1,3-diamine
Inchi:	InChI=1S/C8H20N2/c1-8(10(4)5)6-7-9(2)3/h8H,6-7H2,1-5H3
InchiKey:	AXFVIWBTKYFOCY-UHFFFAOYSA-N
Formula:	C8H20N2
SMILES:	CC(CCN(C)C)N(C)C
Mol. weight [g/mol]:	144.26
CAS:	97-84-7

Physical Properties

Property code	Value	Unit	Source
gf	235.60	kJ/mol	Joback Method
hf	-78.67	kJ/mol	Joback Method
hfus	19.00	kJ/mol	Joback Method
hvap	37.10	kJ/mol	Joback Method
log10ws	-0.42		Crippen Method
logp	0.888		Crippen Method
mcvol	143.540	ml/mol	McGowan Method
pc	2545.61	kPa	Joback Method
tb	438.20	K	NIST Webbook
tc	571.60	K	Joback Method
tf	229.86	K	Joback Method
vc	0.513	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	291.34	J/mol×K	406.88	Joback Method
cpg	306.80	J/mol×K	434.33	Joback Method
cpg	321.62	J/mol×K	461.79	Joback Method
cpg	335.80	J/mol×K	489.24	Joback Method
cpg	349.37	J/mol×K	516.69	Joback Method
cpg	362.34	J/mol×K	544.14	Joback Method
cpg	374.73	J/mol×K	571.60	Joback Method
hvapt	49.20	kJ/mol	318.00	NIST Webbook
hvapt	42.70	kJ/mol	387.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.56179e+01
Coeff. B	-4.12890e+03
Coeff. C	-6.28310e+01
Temperature range (K), min.	325.15
Temperature range (K), max.	463.45

Sources

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=C97847&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

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
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume