2,2,4,4-Tetramethyl-1,3-cyclobutane diamine

Other names: 2,2,4,4-tetramethylcyclobutane-1,3-diamine
Inchi: InChI=1S/C8H18N2/c1-7(2)5(9)8(3,4)6(7)10/h5-6H,9-10H2,1-4H3
InchiKey: QWEVGNOJPHTVEY-UHFFFAOYSA-N
Formula: C8H18N2
SMILES: CC1(C)C(N)C(C)(C)C1N
Mol. weight [g/mol]: 142.24
CAS: 7531-10-4

Physical Properties

Property code	Value	Unit	Source
gf	163.92	kJ/mol	Joback Method
hf	-104.77	kJ/mol	Joback Method
hfus	13.52	kJ/mol	Joback Method
hvap	51.54	kJ/mol	Joback Method
log10ws	-1.67		Crippen Method
logp	0.707		Crippen Method
mcvol	132.680	ml/mol	McGowan Method
pc	3356.75	kPa	Joback Method
tb	524.98	K	Joback Method
tc	752.13	K	Joback Method
tf	395.94	K	Joback Method
vc	0.483	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	342.41	J/mol×K	524.98	Joback Method
cpg	358.84	J/mol×K	562.84	Joback Method
cpg	374.10	J/mol×K	600.70	Joback Method
cpg	388.40	J/mol×K	638.56	Joback Method
cpg	401.97	J/mol×K	676.42	Joback Method
cpg	415.03	J/mol×K	714.27	Joback Method
cpg	427.80	J/mol×K	752.13	Joback Method

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7531104&Units=SI

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