Piperidine, 2,2,6,6-tetramethyl-

Other names:	2,2,6,6-Tetramethylpiperidine
	Norpempidine
Inchi:	InChI=1S/C9H19N/c1-8(2)6-5-7-9(3,4)10-8/h10H,5-7H2,1-4H3
InchiKey:	RKMGAJGJIURJSJ-UHFFFAOYSA-N
Formula:	C9H19N
SMILES:	CC1(C)CCCC(C)(C)N1
Mol. weight [g/mol]:	141.25
CAS:	768-66-1

Physical Properties

Property code	Value	Unit	Source
affp	987.00	kJ/mol	NIST Webbook
basg	953.90	kJ/mol	NIST Webbook
chl	-6050.10 ± 1.50	kJ/mol	NIST Webbook
gf	118.37	kJ/mol	Joback Method
hf	-159.90 ± 2.80	kJ/mol	NIST Webbook
hfl	-206.90 ± 2.00	kJ/mol	NIST Webbook
hfus	8.97	kJ/mol	Joback Method
hvap	47.00	kJ/mol	NIST Webbook
hvap	47.00 ± 2.00	kJ/mol	NIST Webbook
ie	7.59 ± 0.05	eV	NIST Webbook
ie	8.14	eV	NIST Webbook
ie	7.39	eV	NIST Webbook
log10ws	-2.90		Crippen Method
logp	2.317		Crippen Method
mcvol	136.790	ml/mol	McGowan Method
pc	3103.64	kPa	Joback Method
rinpol	947.00		NIST Webbook
rinpol	947.00		NIST Webbook
tb	429.20	K	NIST Webbook
tb	425.20	K	NIST Webbook
tc	693.71	K	Joback Method
tf	347.16	K	Joback Method
vc	0.504	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	304.28	J/mol×K	469.23	Joback Method
cpg	323.83	J/mol×K	506.64	Joback Method
cpg	341.92	J/mol×K	544.06	Joback Method
cpg	358.75	J/mol×K	581.47	Joback Method
cpg	374.51	J/mol×K	618.88	Joback Method
cpg	389.42	J/mol×K	656.30	Joback Method
cpg	403.67	J/mol×K	693.71	Joback Method
hvapt	44.50 ± 0.50	kJ/mol	300.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.47292e+01
Coeff. B	-3.68789e+03
Coeff. C	-6.04540e+01
Temperature range (K), min.	301.15
Temperature range (K), max.	452.05

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C768661&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
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

Legend

affp:	Proton affinity
basg:	Gas basicity
chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase 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
pvap:	Vapor pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume