

Hydrazine, 1,1-diethyl-

Other names:	1,1-Diethylhydrazine N,N-Diethylhydrazine
Inchi:	InChI=1S/C4H12N2/c1-3-6(5)4-2/h3-5H2,1-2H3
InchiKey:	IFZHGQSUNAKKSN-UHFFFAOYSA-N
Formula:	C4H12N2
SMILES:	CCN(N)CC
Mol. weight [g/mol]:	88.15
CAS:	616-40-0

Physical Properties

Property code	Value	Unit	Source
gf	160.03	kJ/mol	Joback Method
hf	-24.57	kJ/mol	Joback Method
hfus	14.33	kJ/mol	Joback Method
hvap	37.18	kJ/mol	Joback Method
ie	7.59 ± 0.05	eV	NIST Webbook
ie	7.96 ± 0.05	eV	NIST Webbook
log10ws	-0.49		Crippen Method
logp	0.202		Crippen Method
mcvol	87.180	ml/mol	McGowan Method
pc	4178.49	kPa	Joback Method
rinpol	687.00		NIST Webbook
tb	375.89	K	Joback Method
tc	556.09	K	Joback Method
tf	250.57	K	Joback Method
vc	0.306	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	164.25	J/mol×K	375.89	Joback Method
cpg	174.32	J/mol×K	405.92	Joback Method
cpg	183.93	J/mol×K	435.96	Joback Method
cpg	193.12	J/mol×K	465.99	Joback Method

cpg	201.89	J/mol×K	496.02	Joback Method
cpg	210.26	J/mol×K	526.05	Joback Method
cpg	218.23	J/mol×K	556.09	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.51215e+01
Coeff. B	-3.48763e+03
Coeff. C	-4.46080e+01
Temperature range (K), min.	279.72
Temperature range (K), max.	400.13

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C616400&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

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
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

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