Hydrazine, 1-butyl-1-methyl-

Other names: 1-Butyl-1-methylhydrazine
1-Methyl-1-n-butylhydrazine
Hydrazine, butylmethyl-
Methylbutyl hydrazine
Inchi: InChI=1S/C5H14N2/c1-3-4-5-7(2)6/h3-6H2,1-2H3
InchiKey: OEEGQMYUIKPQMM-UHFFFAOYSA-N
Formula: C5H14N2
SMILES: CCCCN(C)N
Mol. weight [g/mol]: 102.18
CAS: 20240-62-4

Physical Properties

Property code	Value	Unit	Source
gf	168.45	kJ/mol	Joback Method
hf	-45.21	kJ/mol	Joback Method
hfus	16.92	kJ/mol	Joback Method
hvap	39.41	kJ/mol	Joback Method
ie	7.62 ± 0.05	eV	NIST Webbook
ie	7.51 ± 0.02	eV	NIST Webbook
ie	7.82 ± 0.05	eV	NIST Webbook
log10ws	-0.91		Crippen Method
logp	0.592		Crippen Method
mcvol	101.270	ml/mol	McGowan Method
pc	3704.46	kPa	Joback Method
rinpol	798.00		NIST Webbook
tb	398.77	K	Joback Method
tc	578.11	K	Joback Method
tf	261.84	K	Joback Method
vc	0.362	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	201.04	J/mol×K	398.77	Joback Method

cpg	212.39	J/mol×K	428.66	Joback Method
cpg	223.25	J/mol×K	458.55	Joback Method
cpg	233.62	J/mol×K	488.44	Joback Method
cpg	243.52	J/mol×K	518.33	Joback Method
cpg	252.96	J/mol×K	548.22	Joback Method
cpg	261.97	J/mol×K	578.11	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	2.07602e+01
Coeff. B	-5.35625e+03
Coeff. C	-5.87300e+01
Temperature range (K), min.	320.36
Temperature range (K), max.	405.44

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=C20240624&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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