1-Butanamine, N-propyl-

Other names:	Butylamine, N-propyl-
	Butylpropylamine
	N-Butyl-N-propylamine
	N-Propyl-1-butylamine
	N-Propylbutylamine
	propylbutyl-amine
Inchi:	InChI=1S/C7H17N/c1-3-5-7-8-6-4-2/h8H,3-7H2,1-2H3
InchiKey:	CWYZDPHNAGSFQB-UHFFFAOYSA-N
Formula:	C7H17N
SMILES:	CCCCNCCC
Mol. weight [g/mol]:	115.22
CAS:	20193-21-9

Physical Properties

Property code	Value	Unit	Source
gf	97.45	kJ/mol	Joback Method
hf	-134.34	kJ/mol	Joback Method
hfus	18.98	kJ/mol	Joback Method
hvap	37.61	kJ/mol	Joback Method
log10ws	-1.94		Crippen Method
logp	1.786		Crippen Method
mcvol	119.470	ml/mol	McGowan Method
pc	2838.39	kPa	Joback Method
rinpol	847.00		NIST Webbook
tb	409.73	K	Joback Method
tc	578.95	K	Joback Method
tf	221.31	K	Joback Method
vc	0.463	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	238.17	J/mol×K	409.73	Joback Method
cpg	250.74	J/mol×K	437.93	Joback Method

cpg	262.84	J/mol×K	466.14	Joback Method
cpg	274.48	J/mol×K	494.34	Joback Method
cpg	285.67	J/mol×K	522.55	Joback Method
cpg	296.42	J/mol×K	550.75	Joback Method
cpg	306.74	J/mol×K	578.95	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.54299e+01
Coeff. B	-3.83283e+03
Coeff. C	-5.41990e+01
Temperature range (K), min.	307.32
Temperature range (K), max.	433.00

Sources

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=C20193219&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

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
pvap:	Vapor pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume