

2-Methyl-2-aminobutane

Other names:	1,1-dimethylpropylamine
	2-amino-2-methylbutane
	2-butanamine, 2-methyl-
	alpha,alpha-dimethylpropylamine
	t-Amylamine
	tert-C5H11NH2
	tert-amylamine
	tert-pentylamine
	«alpha»,«alpha»-Dimethylpropylamine
Inchi:	InChI=1S/C5H13N/c1-4-5(2,3)6/h4,6H2,1-3H3
InchiKey:	GELMWIVBBPAMIO-UHFFFAOYSA-N
Formula:	C5H13N
SMILES:	CCC(C)(C)N
Mol. weight [g/mol]:	87.17
CAS:	594-39-8

Physical Properties

Property code	Value	Unit	Source
af	0.3542		Cheméo Relay (1.0)
affp	937.80	kJ/mol	NIST Webbook
basg	903.60	kJ/mol	NIST Webbook
gf	60.51	kJ/mol	Joback Method
hf	-139.92	kJ/mol	Cheméo Relay (1.0)
hfus	6.49	kJ/mol	Joback Method
hvap	33.62	kJ/mol	Cheméo Relay (1.0)
ie	8.50 ± 0.10	eV	NIST Webbook
log10ws	-1.19		Cheméo Relay (1.0)
logp	1.134		Crippen Method
mcvol	91.290	ml/mol	McGowan Method
pc	3801.00	kPa	Joback Method
tb	350.20	K	NIST Webbook
tb	350.00	K	NIST Webbook
tb	350.65 ± 3.00	K	NIST Webbook
tb	350.05 ± 0.30	K	NIST Webbook
tb	352.15 ± 5.00	K	NIST Webbook
tc	527.11	K	Cheméo Relay (1.0)
tf	168.15 ± 0.60	K	NIST Webbook

vc	0.331	m3/kmol	Cheméo Relay (1.0)
volm	1.19e-04	m3/mol	Thermodynamic study of (heptane + amine) mixtures. II. Excess and partial molar volumes at 298.15 K

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	175.09	J/mol×K	383.10	Joback Method
cpg	186.67	J/mol×K	415.34	Joback Method
cpg	197.63	J/mol×K	447.58	Joback Method
cpg	208.00	J/mol×K	479.82	Joback Method
cpg	217.79	J/mol×K	512.07	Joback Method
cpg	227.04	J/mol×K	544.31	Joback Method
cpg	235.77	J/mol×K	576.55	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.38662e+01
Coeff. B	-2.49027e+03
Coeff. C	-8.09180e+01
Temperature range (K), min.	264.32
Temperature range (K), max.	372.02

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C594398&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Thermodynamic study of (heptane + amine) mixtures. II. Excess and partial molar volumes at 298.15 K:	https://www.doi.org/10.1016/j.jct.2010.12.025
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

Crippen Method:

https://www.chemeo.com/doc/models/crippen_log10ws

Cheméo Relay (1.0):

**The Yaws Handbook of Vapor
Pressure:
Cheméo Relay (1.0, beta):**

<https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>

Legend

af:	Acentric Factor
affp:	Proton affinity
basg:	Gas basicity
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume
volm:	Molar Volume

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