1,2-Benzenediamine, 4-methyl-

Other names:	Toluene-3,4-diamine
	1,2-Diamino-4-methylbenzene
	3,4-Diamino-1-methylbenzene
	3,4-Diaminotoluene
	3,4-Toluenediamine
	3,4-Toluylenediamine
	3,4-Tolylenediamine
	4-Methyl-o-phenylenediamine
	4-Methyl-1,2-diaminobenzene
	4-Methyl-1,2-phenylenediamine
	4-Methyl-1,2-benzenediamine
	NSC 1495
Inchi:	InChI=1S/C7H10N2/c1-5-2-3-6(8)7(9)4-5/h2-4H,8-9H2,1H3
InchiKey:	DGRGLKZMKWPMOH-UHFFFAOYSA-N
Formula:	C7H10N2
SMILES:	Cc1ccc(N)c(N)c1
Mol. weight [g/mol]:	122.17
CAS:	496-72-0

Physical Properties

Property code	Value	Unit	Source
gf	234.11	kJ/mol	Joback Method
hf	93.36	kJ/mol	Joback Method
hfus	17.54	kJ/mol	Joback Method
hvap	56.06	kJ/mol	Joback Method
log10ws	-1.21		Crippen Method
logp	1.159		Crippen Method
mcvol	105.690	ml/mol	McGowan Method
pc	4596.38	kPa	Joback Method
tb	538.20	K	NIST Webbook
tc	781.39	K	Joback Method
tf	386.63	K	Joback Method
vc	0.378	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	237.29	J/mol×K	541.26	Joback Method
cpg	248.42	J/mol×K	581.28	Joback Method
cpg	258.84	J/mol×K	621.30	Joback Method
cpg	268.59	J/mol×K	661.32	Joback Method
cpg	277.69	J/mol×K	701.34	Joback Method
cpg	286.17	J/mol×K	741.37	Joback Method
cpg	294.05	J/mol×K	781.39	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	428.70	K	2.40	NIST Webbook

Sources

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=C496720&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume