Benzenebutanol

Other names:	1-butanol, 4-phenyl-
	4-Phenyl butanol-1
	4-Phenyl-n-butanol
	4-Phenylbutanol
	4-phenyl-1-butanol
	4-phenylbutan-1-ol
	Phenylbutyl alcohol
Inchi:	InChI=1S/C10H14O/c11-9-5-4-8-10-6-2-1-3-7-10/h1-3,6-7,11H,4-5,8-9H2
InchiKey:	LDZLXQFDGRCELX-UHFFFAOYSA-N
Formula:	C10H14O
SMILES:	OCCCCc1ccccc1
Mol. weight [g/mol]:	150.22
CAS:	3360-41-6

Physical Properties

Property code	Value	Unit	Source
gf	8.91	kJ/mol	Joback Method
hf	-165.43	kJ/mol	Joback Method
hfus	19.79	kJ/mol	Joback Method
hvap	56.81	kJ/mol	Joback Method
log10ws	-2.37		Crippen Method
logp	2.002		Crippen Method
mcvol	133.870	ml/mol	McGowan Method
pc	3070.00	kPa	Vapor-Liquid Critical Properties of Phenol and (C8 to C10) Phenylalkanols
tb	547.06	K	Joback Method
tc	739.47	K	Joback Method
tf	289.70	K	Joback Method
vc	0.506	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source

cpg	311.72	J/mol×K	547.06	Joback Method
cpg	324.22	J/mol×K	579.13	Joback Method
cpg	336.04	J/mol×K	611.20	Joback Method
cpg	347.19	J/mol×K	643.27	Joback Method
cpg	357.73	J/mol×K	675.33	Joback Method
cpg	367.66	J/mol×K	707.40	Joback Method
cpg	377.01	J/mol×K	739.47	Joback Method
dvisc	0.0140109	Pa×s	289.70	Joback Method
dvisc	0.0036769	Pa×s	332.59	Joback Method
dvisc	0.0013099	Pa×s	375.49	Joback Method
dvisc	0.0005766	Pa×s	418.38	Joback Method
dvisc	0.0002957	Pa×s	461.27	Joback Method
dvisc	0.0001699	Pa×s	504.17	Joback Method
dvisc	0.0001065	Pa×s	547.06	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C3360416&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Vapor-Liquid Critical Properties of Phenol and (C8 to C10) Phenylalkanols:	https://www.doi.org/10.1021/je0604380
Partitioning of Phenylalkanols between Micelles and Water Studied by Limiting Interdiffusion Coefficients in Water and Tetradecyltrimethylammonium Bromide Solutions:	https://www.doi.org/10.1021/je900967j
JobackMethod:	https://en.wikipedia.org/wiki/Joback_method

Legend

cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
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

tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume