p-Hydroxybiphenyl

Other names:	1,1'-biphenyl-4-ol
	1-Hydroxy-4-phenylbenzene
	4-Biphenylol
	4-Diphenylol
	4-Hydroxy-1,1'-biphenyl
	4-Hydroxybiphenyl
	4-Hydroxydiphenyl
	4-Phenylphenol
	Biphenyl-4-ol
	NSC 1858
	Paraxenol
	Phenol, p-phenyl
	Tetrasin P 300
	Tetrosin P 300
	[1,1'-Biphenyl]-4-ol
	p-Biphenylol
	p-Hydroxydiphenyl
	p-Phenylphenol
	p-Xenol
	phenol, 4-phenyl-
Inchi:	InChI=1S/C12H10O/c13-12-8-6-11(7-9-12)10-4-2-1-3-5-10/h1-9,13H
InchiKey:	YXVFYQXJAXKLAK-UHFFFAOYSA-N
Formula:	C12H10O
SMILES:	Oc1ccc(-c2ccccc2)cc1
Mol. weight [g/mol]:	170.21
CAS:	92-69-3

Physical Properties

Property code	Value	Unit	Source
chs	-6067.00	kJ/mol	NIST Webbook
gf	120.36	kJ/mol	Joback Method
hf	35.70	kJ/mol	NIST Webbook
hfs	-84.00	kJ/mol	NIST Webbook
hfus	20.70	kJ/mol	Joback Method
hsub	119.40	kJ/mol	NIST Webbook
hsub	119.70	kJ/mol	NIST Webbook
hsub	109.80 ± 1.00	kJ/mol	NIST Webbook

hvap	59.87	kJ/mol	Joback Method
ie	7.78 ± 0.03	eV	NIST Webbook
log10ws	-3.48		Estimated Solubility Method
log10ws	-3.48		Aqueous Solubility Prediction Method
logp	3.059		Crippen Method
mcvol	138.290	ml/mol	McGowan Method
pc	4114.41	kPa	Joback Method
rinpol	1745.30		NIST Webbook
rinpol	1683.00		NIST Webbook
rinpol	291.50		NIST Webbook
rinpol	1723.00		NIST Webbook
rinpol	1708.00		NIST Webbook
rinpol	1713.00		NIST Webbook
rinpol	1683.00		NIST Webbook
rinpol	1713.00		NIST Webbook
tb	594.20	K	NIST Webbook
tb	579.50 ± 1.50	K	NIST Webbook
tc	868.51	K	Joback Method
tf	437.50 ± 0.50	K	NIST Webbook
tf	437.15 ± 1.00	K	NIST Webbook
tf	439.35	K	Aqueous Solubility Prediction Method
vc	0.458	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	388.46	J/mol×K	825.08	Joback Method
cpg	356.10	J/mol×K	694.80	Joback Method
cpg	343.33	J/mol×K	651.37	Joback Method
cpg	329.32	J/mol×K	607.94	Joback Method
cpg	367.77	J/mol×K	738.23	Joback Method
cpg	397.79	J/mol×K	868.51	Joback Method
cpg	378.51	J/mol×K	781.65	Joback Method
dvisc	0.0013048	Pa×s	389.56	Joback Method
dvisc	0.0000320	Pa×s	607.94	Joback Method
dvisc	0.0000488	Pa×s	571.54	Joback Method
dvisc	0.0000788	Pa×s	535.15	Joback Method
dvisc	0.0001363	Pa×s	498.75	Joback Method
dvisc	0.0002570	Pa×s	462.35	Joback Method

dvisc	0.0005403	Pa×s	425.96	Joback Method
hfust	31.59	kJ/mol	443.10	NIST Webbook
hsubt	106.60 ± 1.00	kJ/mol	350.50	NIST Webbook
hsubt	97.00	kJ/mol	337.50	NIST Webbook
hvapt	72.30	kJ/mol	515.50	NIST Webbook

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Solubilities of Substituted Phenols in Supercritical Carbon Dioxide:	https://www.doi.org/10.1021/je060058e
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
Aqueous Solubility Prediction Method:	http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDa
Estimated Solubility Method:	http://pubs.acs.org/doi/suppl/10.1021/ci034243x/suppl_file/ci034243xsi20040112_053635.txt
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C92693&Units=SI

Legend

chs:	Standard solid enthalpy of combustion
cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfs:	Solid phase enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hfust:	Enthalpy of fusion at a given temperature
hsub:	Enthalpy of sublimation at standard conditions
hsubt:	Enthalpy of sublimation at a given temperature
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature

tf: Normal melting (fusion) point

vc: Critical Volume