[1,1'-Biphenyl]-4-carboxaldehyde

Other names:	4-Biphenylcarboxaldehyde
	p-Biphenylcarboxaldehyde
	p-Biphenylylaldehyde
	p-Phenylbenzaldehyde
	Biphenyl-4-carboxaldehyde
	4-Biphenylaldehyde
	4-Biphenylylcarboxaldehyde
	4-Phenylbenzaldehyde
	4-Biphenylcarboxyaldehyde
	p-Biphenylaldehyde
	4-Formylbiphenyl
	4-Formyl-1,1'-biphenyl
	NSC 46066
	Benzaldehyde, p-phenyl-
Inchi:	InChI=1S/C13H10O/c14-10-11-6-8-13(9-7-11)12-4-2-1-3-5-12/h1-10H
InchiKey:	ISDBWOPVZKNQDW-UHFFFAOYSA-N
Formula:	C13H10O
SMILES:	O=Cc1ccc(-c2ccccc2)cc1
Mol. weight [g/mol]:	182.22
CAS:	3218-36-8

Physical Properties

Property code	Value	Unit	Source
gf	174.25	kJ/mol	Joback Method
hf	64.36	kJ/mol	Joback Method
hfus	19.41	kJ/mol	Joback Method
hvap	56.47	kJ/mol	Joback Method
ie	8.47 ± 0.03	eV	NIST Webbook
log10ws	-4.32		Crippen Method
logp	3.166		Crippen Method
mcvol	148.080	ml/mol	McGowan Method
pc	3284.05	kPa	Joback Method
rinpol	1673.00		NIST Webbook
tb	603.84	K	Joback Method
tc	851.33	K	Joback Method
tf	343.63	K	Joback Method
vc	0.565	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	342.32	J/mol×K	603.84	Joback Method
cpg	356.89	J/mol×K	645.09	Joback Method
cpg	370.27	J/mol×K	686.34	Joback Method
cpg	382.53	J/mol×K	727.59	Joback Method
cpg	393.76	J/mol×K	768.84	Joback Method
cpg	404.01	J/mol×K	810.08	Joback Method
cpg	413.37	J/mol×K	851.33	Joback Method
dvisc	0.0019888	Pa×s	343.63	Joback Method
dvisc	0.0011266	Pa×s	387.00	Joback Method
dvisc	0.0007156	Pa×s	430.37	Joback Method
dvisc	0.0004940	Pa×s	473.74	Joback Method
dvisc	0.0003628	Pa×s	517.10	Joback Method
dvisc	0.0002795	Pa×s	560.47	Joback Method
dvisc	0.0002236	Pa×s	603.84	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	457.20	K	1.50	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C3218368&Units=SI

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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

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