1,1'-Biphenyl, 3,3'-dichloro-

Other names:	1-chloro-3-(3-chlorophenyl)benzene
	3,3'-Dichlorobiphenyl
	3,3'-Dichlorodiphenyl
	Biphenyl, 3,3'-dichloro-
	PCB 11
	m,m'-Dichlorobiphenyl
Inchi:	InChI=1S/C12H8Cl2/c13-11-5-1-3-9(7-11)10-4-2-6-12(14)8-10/h1-8H
InchiKey:	KTXUOWUHFLBZPW-UHFFFAOYSA-N
Formula:	C12H8Cl2
SMILES:	Clc1cccc(-c2cccc(Cl)c2)c1
Mol. weight [g/mol]:	223.10
CAS:	2050-67-1

Physical Properties

Property code	Value	Unit	Source
gf	231.86	kJ/mol	Joback Method
hf	127.63	kJ/mol	Joback Method
hfus	22.53	kJ/mol	Joback Method
hvap	81.00 ± 0.20	kJ/mol	NIST Webbook
log10ws	-5.80		Aqueous Solubility Prediction Method
logp	4.660		Crippen Method
mcvol	156.900	ml/mol	McGowan Method
pc	3045.68	kPa	Joback Method
rinpol	1725.00		NIST Webbook
rinpol	1725.40		NIST Webbook
rinpol	1756.00		NIST Webbook
rinpol	1746.00		NIST Webbook
rinpol	1769.00		NIST Webbook
rinpol	1772.00		NIST Webbook
rinpol	1769.00		NIST Webbook
rinpol	1725.40		NIST Webbook
tb	612.14	K	Joback Method
tc	871.88	K	Joback Method
tf	362.72	K	Joback Method
vc	0.590	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	391.60	J/mol×K	871.88	Joback Method
cpg	383.35	J/mol×K	828.59	Joback Method
cpg	374.26	J/mol×K	785.30	Joback Method
cpg	364.26	J/mol×K	742.01	Joback Method
cpg	353.28	J/mol×K	698.72	Joback Method
cpg	341.24	J/mol×K	655.43	Joback Method
cpg	328.07	J/mol×K	612.14	Joback Method
dvisc	0.0013975	Pa×s	362.72	Joback Method
dvisc	0.0001963	Pa×s	612.14	Joback Method
dvisc	0.0002417	Pa×s	570.57	Joback Method
dvisc	0.0003074	Pa×s	529.00	Joback Method
dvisc	0.0004074	Pa×s	487.43	Joback Method
dvisc	0.0005691	Pa×s	445.86	Joback Method
dvisc	0.0008516	Pa×s	404.29	Joback Method
hvapt	75.40	kJ/mol	368.00	NIST Webbook

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C2050671&Units=SI

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

Joback Method: https://en.wikipedia.org/wiki/Joback_method

Aqueous Solubility Prediction Method: http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDa

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
hvapt:	Enthalpy of vaporization at a given temperature
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

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