1,1'-Biphenyl, 2,4,5-trichloro-

Other names:	1,2,4-trichloro-5-phenylbenzene
	2,4,5-Trichloro-1,1-biphenyl
	2,4,5-Trichlorobiphenyl
	Biphenyl, 2,4,5-trichloro-
	PCB 29
Inchi:	InChI=1S/C12H7Cl3/c13-10-7-12(15)11(14)6-9(10)8-4-2-1-3-5-8/h1-7H
InchiKey:	VGVIKVCCUATMNG-UHFFFAOYSA-N
Formula:	C12H7Cl3
SMILES:	Clc1cc(Cl)c(-c2ccccc2)cc1Cl
Mol. weight [g/mol]:	257.54
CAS:	15862-07-4

Physical Properties

Property code	Value	Unit	Source
gf	210.30	kJ/mol	Joback Method
hf	100.42	kJ/mol	Joback Method
hfus	26.34	kJ/mol	Joback Method
hvap	62.00	kJ/mol	Joback Method
log10ws	-6.27		Aqueous Solubility Prediction Method
logp	5.314		Crippen Method
mcvol	169.140	ml/mol	McGowan Method
pc	2878.12	kPa	Joback Method
rinpol	1846.00		NIST Webbook
rinpol	1812.10		NIST Webbook
rinpol	1799.00		NIST Webbook
rinpol	1800.00		NIST Webbook
tb	654.55	K	Joback Method
tc	917.95	K	Joback Method
tf	349.92	K	Aqueous Solubility Prediction Method
tf	349.50 ± 0.20	K	NIST Webbook
vc	0.638	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	390.14	J/mol×K	830.15	Joback Method
cpg	405.36	J/mol×K	917.95	Joback Method
cpg	398.13	J/mol×K	874.05	Joback Method
cpg	349.20	J/mol×K	654.55	Joback Method
cpg	360.92	J/mol×K	698.45	Joback Method
cpg	371.61	J/mol×K	742.35	Joback Method
cpg	381.33	J/mol×K	786.25	Joback Method
dvisc	0.0001852	Pa×s	654.55	Joback Method
dvisc	0.0002805	Pa×s	571.42	Joback Method
dvisc	0.0002248	Pa×s	612.99	Joback Method
dvisc	0.0010725	Pa×s	405.16	Joback Method
dvisc	0.0006985	Pa×s	446.73	Joback Method
dvisc	0.0004893	Pa×s	488.29	Joback Method
dvisc	0.0003625	Pa×s	529.86	Joback Method
hfust	22.80	kJ/mol	349.50	NIST Webbook
hfust	22.80	kJ/mol	349.50	NIST Webbook
hvapt	76.60	kJ/mol	368.00	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C15862074&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
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

hfust:	Enthalpy of fusion at a given temperature
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