1,1'-Biphenyl, 4-(1-methylethyl)-

Other names:	4-Isopropyl-1,1'-biphenyl
	4-Isopropylbiphenyl
	Biphenyl, 4-isopropyl-
	p-Isopropyldiphenyl
Inchi:	InChI=1S/C15H16/c1-12(2)13-8-10-15(11-9-13)14-6-4-3-5-7-14/h3-12H,1-2H3
InchiKey:	KWSHGRJUSUJPQD-UHFFFAOYSA-N
Formula:	C15H16
SMILES:	CC(C)c1ccc(-c2ccccc2)cc1
Mol. weight [g/mol]:	196.29
CAS:	7116-95-2

Physical Properties

Property code	Value	Unit	Source
gf	288.17	kJ/mol	Joback Method
hf	103.38	kJ/mol	Joback Method
hfus	18.78	kJ/mol	Joback Method
hvap	53.81	kJ/mol	Joback Method
log10ws	-5.26		Crippen Method
logp	4.477		Crippen Method
mcvol	174.690	ml/mol	McGowan Method
pc	2492.52	kPa	Joback Method
rinpol	282.20		NIST Webbook
rinpol	1713.00		NIST Webbook
rinpol	1709.00		NIST Webbook
rinpol	1700.00		NIST Webbook
ripol	2228.00		NIST Webbook
ripol	2228.00		NIST Webbook
ripol	2300.00		NIST Webbook
ripol	2255.00		NIST Webbook
tb	559.00 ± 2.00	K	NIST Webbook
tc	841.46	K	Joback Method
tf	391.00 ± 4.00	K	NIST Webbook
vc	0.653	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	513.52	J/mol×K	841.46	Joback Method
cpg	440.19	J/mol×K	640.66	Joback Method
cpg	457.26	J/mol×K	680.82	Joback Method
cpg	473.06	J/mol×K	720.98	Joback Method
cpg	487.65	J/mol×K	761.14	Joback Method
cpg	501.11	J/mol×K	801.30	Joback Method
cpg	421.76	J/mol×K	600.50	Joback Method
cpl	421.30	J/mol×K	422.00	NIST Webbook
cpl	338.50	J/mol×K	298.00	NIST Webbook
cpl	343.90	J/mol×K	295.00	NIST Webbook
dvisc	0.0024536	Pa×s	309.17	Joback Method
dvisc	0.0011250	Pa×s	357.73	Joback Method
dvisc	0.0006215	Pa×s	406.28	Joback Method
dvisc	0.0003897	Pa×s	454.84	Joback Method
dvisc	0.0002674	Pa×s	503.39	Joback Method
dvisc	0.0001960	Pa×s	551.95	Joback Method
dvisc	0.0001511	Pa×s	600.50	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.44149e+01
Coeff. B	-4.53024e+03
Coeff. C	-9.65660e+01
Temperature range (K), min.	417.24
Temperature range (K), max.	594.21

Sources

Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

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

KDB:	https://www.cheric.org/files/research/kdb/mol/mol796.mol
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7116952&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

cpg:	Ideal gas heat capacity
cpl:	Liquid phase 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
pvap:	Vapor pressure
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume