1,1'-Biphenyl, 2-(1-methylethyl)-

Other names: 1,1'-Biphenyl,2-isopropyl-
Inchi: InChI=1S/C15H16/c1-12(2)14-10-6-7-11-15(14)13-8-4-3-5-9-13/h3-12H,1-2H3
InchiKey: HKTCLPBBJDIBGF-UHFFFAOYSA-N
Formula: C15H16
SMILES: CC(C)c1ccccc1-c1ccccc1
Mol. weight [g/mol]: 196.29
CAS: 19486-60-3

Physical Properties

Property code	Value	Unit	Source
chl	-7887.00	kJ/mol	NIST Webbook
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
ie	8.50 ± 0.02	eV	NIST Webbook
log10ws	-5.26		Crippen Method
logp	4.477		Crippen Method
mcvol	174.690	ml/mol	McGowan Method
pc	2492.52	kPa	Joback Method
rinpol	1512.00		NIST Webbook
rinpol	1500.00		NIST Webbook
ripol	2015.00		NIST Webbook
ripol	2015.00		NIST Webbook
ripol	1980.00		NIST Webbook
tb	542.92 ± 0.30	K	NIST Webbook
tb	542.92 ± 0.15	K	NIST Webbook
tc	841.46	K	Joback Method
tf	297.61 ± 0.15	K	NIST Webbook
tf	297.61 ± 0.10	K	NIST Webbook
vc	0.653	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	421.76	J/mol×K	600.50	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	513.52	J/mol×K	841.46	Joback Method
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

Sources

Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C19486603&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

chl:	Standard liquid 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
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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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