

1,1'-Biphenyl, 2,3-dimethyl-

Other names:	2,3-dimethylbiphenyl
Inchi:	InChI=1S/C14H14/c1-11-7-6-10-14(12(11)2)13-8-4-3-5-9-13/h3-10H,1-2H3
InchiKey:	HCAHMRPMBVHGU-UHFFFAOYSA-N
Formula:	C14H14
SMILES:	<chem>Cc1cccc(-c2ccccc2)c1C</chem>
Mol. weight [g/mol]:	182.26
CAS:	3864-18-4

Physical Properties

Property code	Value	Unit	Source
gf	272.56	kJ/mol	Joback Method
hf	117.83	kJ/mol	Joback Method
hfus	19.32	kJ/mol	Joback Method
hvap	52.63	kJ/mol	Joback Method
log10ws	-5.03		Crippen Method
logp	3.970		Crippen Method
mcvol	160.600	ml/mol	McGowan Method
pc	2684.64	kPa	Joback Method
rinpol	1574.00		NIST Webbook
rinpol	1562.00		NIST Webbook
ripol	2100.00		NIST Webbook
ripol	2137.00		NIST Webbook
tb	583.04	K	Joback Method
tc	824.77	K	Joback Method
tf	325.42	K	Joback Method
vc	0.604	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	371.85	J/molxK	583.04	Joback Method
cpg	388.95	J/molxK	623.33	Joback Method
cpg	404.83	J/molxK	663.62	Joback Method
cpg	419.57	J/molxK	703.90	Joback Method

cpg	433.22	J/molxK	744.19	Joback Method
cpg	445.84	J/molxK	784.48	Joback Method
cpg	457.50	J/molxK	824.77	Joback Method
dvisc	0.0014925	Paxs	325.42	Joback Method
dvisc	0.0008435	Paxs	368.36	Joback Method
dvisc	0.0005371	Paxs	411.29	Joback Method
dvisc	0.0003724	Paxs	454.23	Joback Method
dvisc	0.0002751	Paxs	497.17	Joback Method
dvisc	0.0002132	Paxs	540.10	Joback Method
dvisc	0.0001716	Paxs	583.04	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.45593e+01
Coeff. B	-4.51771e+03
Coeff. C	-9.43700e+01
Temperature range (K), min.	410.92
Temperature range (K), max.	582.89

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C3864184&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
rinpolar:	Non-polar retention indices
ripolar:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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