

# [1,1'-Biphenyl]-2-carbonitrile

<b>Other names:</b>	2-Biphenylcarbonitrile o-Cyanobiphenyl 2-Cyanobiphenyl
<b>Inchi:</b>	InChI=1S/C13H9N/c14-10-12-8-4-5-9-13(12)11-6-2-1-3-7-11/h1-9H
<b>InchiKey:</b>	WLPATYNQCGVFFH-UHFFFAOYSA-N
<b>Formula:</b>	C13H9N
<b>SMILES:</b>	N#Cc1ccccc1-c1ccccc1
<b>Mol. weight [g/mol]:</b>	179.22
<b>CAS:</b>	24973-49-7

## Physical Properties

Property code	Value	Unit	Source
chs	-6634.60 ± 6.70	kJ/mol	NIST Webbook
gf	406.95	kJ/mol	Joback Method
hf	314.82	kJ/mol	Joback Method
hfus	18.62	kJ/mol	Joback Method
hvap	60.22	kJ/mol	Joback Method
log10ws	-4.43		Crippen Method
logp	3.225		Crippen Method
mcvol	147.890	ml/mol	McGowan Method
pc	2940.89	kPa	Joback Method
tb	657.26	K	Joback Method
tc	916.91	K	Joback Method
tf	366.62	K	Joback Method
vc	0.574	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	349.64	J/mol×K	657.26	Joback Method
cpg	362.73	J/mol×K	700.53	Joback Method
cpg	374.69	J/mol×K	743.81	Joback Method
cpg	385.59	J/mol×K	787.08	Joback Method
cpg	395.50	J/mol×K	830.36	Joback Method

cpg	404.51	J/mol×K	873.63	Joback Method
cpg	412.70	J/mol×K	916.91	Joback Method

## Sources

<b>NIST Webbook:</b>	<a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C24973497&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C24973497&amp;Units=SI</a>
<b>Crippen Method:</b>	<a href="http://pubs.acs.org/doi/abs/10.1021/ci9903071">http://pubs.acs.org/doi/abs/10.1021/ci9903071</a>
<b>Crippen Method:</b>	<a href="https://www.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.com/doc/models/crippen_log10ws</a>
<b>Joback Method:</b>	<a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>
<b>McGowan Method:</b>	<a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>

## Legend

<b>chs:</b>	Standard solid enthalpy of combustion
<b>cp<sub>g</sub>:</b>	Ideal gas heat capacity
<b>gf:</b>	Standard Gibbs free energy of formation
<b>hf:</b>	Enthalpy of formation at standard conditions
<b>hfus:</b>	Enthalpy of fusion at standard conditions
<b>h<sub>vap</sub>:</b>	Enthalpy of vaporization at standard conditions
<b>log<sub>10</sub>ws:</b>	Log <sub>10</sub> of Water solubility in mol/l
<b>log<sub>p</sub>:</b>	Octanol/Water partition coefficient
<b>mc<sub>vol</sub>:</b>	McGowan's characteristic volume
<b>pc:</b>	Critical Pressure
<b>tb:</b>	Normal Boiling Point Temperature
<b>tc:</b>	Critical Temperature
<b>tf:</b>	Normal melting (fusion) point
<b>vc:</b>	Critical Volume

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