

# 2-Biphenylcarboxylic acid

<b>Other names:</b>	o-Phenylbenzoic acid Biphenyl-2-carboxylic acid Biphenylcarboxylic acid-(2) [1,1'-Biphenyl]-2-carboxylic acid Diphenyl-2-carboxylic acid 2-Phenylbenzoic acid
<b>Inchi:</b>	InChI=1S/C13H10O2/c14-13(15)12-9-5-4-8-11(12)10-6-2-1-3-7-10/h1-9H,(H,14,15)
<b>InchiKey:</b>	ILYSAKHOYBPSPC-UHFFFAOYSA-N
<b>Formula:</b>	C13H10O2
<b>SMILES:</b>	O=C(O)c1ccccc1-c1ccccc1
<b>Mol. weight [g/mol]:</b>	198.22
<b>CAS:</b>	947-84-2

## Physical Properties

Property code	Value	Unit	Source
chs	-6195.70 ± 6.30	kJ/mol	NIST Webbook
gf	8.03	kJ/mol	Joback Method
hf	-114.87	kJ/mol	Joback Method
hfus	22.81	kJ/mol	Joback Method
hsub	121.30 ± 4.30	kJ/mol	NIST Webbook
hvap	73.17	kJ/mol	Joback Method
log10ws	-4.13		Crippen Method
logp	3.052		Crippen Method
mcvol	153.950	ml/mol	McGowan Method
pc	3611.55	kPa	Joback Method
tb	616.50 ± 0.50	K	NIST Webbook
tb	616.70	K	NIST Webbook
tc	931.94	K	Joback Method
tf	384.00 ± 3.00	K	NIST Webbook
tf	382.00 ± 3.00	K	NIST Webbook
tf	387.00	K	NIST Webbook
vc	0.573	m <sup>3</sup> /kmol	Joback Method

# Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	389.95	J/molxK	701.23	Joback Method
cpg	401.41	J/molxK	739.68	Joback Method
cpg	411.94	J/molxK	778.13	Joback Method
cpg	421.61	J/molxK	816.58	Joback Method
cpg	430.47	J/molxK	855.04	Joback Method
cpg	438.58	J/molxK	893.49	Joback Method
cpg	445.99	J/molxK	931.94	Joback Method
dvisc	0.0017023	Paxs	412.38	Joback Method
dvisc	0.0006982	Paxs	460.52	Joback Method
dvisc	0.0003390	Paxs	508.66	Joback Method
dvisc	0.0001865	Paxs	556.81	Joback Method
dvisc	0.0001128	Paxs	604.95	Joback Method
dvisc	0.0000735	Paxs	653.09	Joback Method
dvisc	0.0000508	Paxs	701.23	Joback Method

# Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	472.20	K	1.30	NIST Webbook

## Sources

Joback Method:

[https://en.wikipedia.org/wiki/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=C947842&Units=SI>

Crippen Method:

<http://pubs.acs.org/doi/abs/10.1021/ci9903071>

Crippen Method:

[https://www.chemeo.com/doc/models/crippen\\_log10ws](https://www.chemeo.com/doc/models/crippen_log10ws)

## Legend

<b>chs:</b>	Standard solid enthalpy of combustion
<b>cpg:</b>	Ideal gas heat capacity
<b>dvisc:</b>	Dynamic viscosity
<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>hsub:</b>	Enthalpy of sublimation at standard conditions
<b>hvap:</b>	Enthalpy of vaporization at standard conditions
<b>log10ws:</b>	Log10 of Water solubility in mol/l
<b>logp:</b>	Octanol/Water partition coefficient
<b>mcvol:</b>	McGowan's characteristic volume
<b>pc:</b>	Critical Pressure
<b>tb:</b>	Normal Boiling Point Temperature
<b>tbrp:</b>	Boiling point at reduced pressure
<b>tc:</b>	Critical Temperature
<b>tf:</b>	Normal melting (fusion) point
<b>vc:</b>	Critical Volume

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