[1,1'-Biphenyl]-2,2'-dicarbonitrile

Other names: Diphenonitrile
2,2'-Dicyanobiphenyl
Inchi: InChI=1S/C14H8N2/c15-9-11-5-1-3-7-13(11)14-8-4-2-6-12(14)10-16/h1-8H
InchiKey: XDQREGRMKWTMOO-UHFFFAOYSA-N
Formula: C14H8N2
SMILES: N#Cc1ccccc1-c1ccccc1C#N
Mol. weight [g/mol]: 204.23
CAS: 4341-02-0

Physical Properties

Property code	Value	Unit	Source
gf	538.92	kJ/mol	Joback Method
hf	447.59	kJ/mol	Joback Method
hfus	22.33	kJ/mol	Joback Method
hvap	73.59	kJ/mol	Joback Method
log10ws	-4.78		Crippen Method
logp	3.097		Crippen Method
mcvol	163.360	ml/mol	McGowan Method
pc	2550.76	kPa	Joback Method
tb	787.20	K	Joback Method
tc	1051.08	K	Joback Method
tf	455.40	K	Joback Method
vc	0.655	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	410.25	J/mol×K	787.20	Joback Method
cpg	420.45	J/mol×K	831.18	Joback Method
cpg	429.70	J/mol×K	875.16	Joback Method
cpg	438.07	J/mol×K	919.14	Joback Method
cpg	445.64	J/mol×K	963.12	Joback Method
cpg	452.49	J/mol×K	1007.10	Joback Method
cpg	458.68	J/mol×K	1051.08	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C4341020&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method

Legend

cpg:	Ideal gas heat capacity
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume