1,1'-Binaphthalene

Other names:	1,1'-Binaphthyl
	«alpha»,«alpha»'-Dinaphthylene
	1,1'-Dinaphthyl
	Di-«alpha»-naphthol
	1,1'-Binaphtyl
Inchi:	InChI=1S/C20H14/c1-3-11-17-15(7-1)9-5-13-19(17)20-14-6-10-16-8-2-4-12-18(16)20/h1-
InchiKey:	ZDZHCHYQNPQSGG-UHFFFAOYSA-N
Formula:	C20H14
SMILES:	c1ccc2c(-c3cccc4ccccc34)cccc2c1
Mol. weight [g/mol]:	254.33
CAS:	604-53-5

Physical Properties

Property code	Value	Unit	Source
chs	-10040.00	kJ/mol	NIST Webbook
gf	536.38	kJ/mol	Joback Method
hf	376.13	kJ/mol	Joback Method
hfus	28.90	kJ/mol	Joback Method
hvap	69.27	kJ/mol	Joback Method
log10ws	-7.68		Crippen Method
logp	5.660		Crippen Method
mcvol	206.220	ml/mol	McGowan Method
pc	2460.47	kPa	Joback Method
rinpol	402.77		NIST Webbook
rinpol	2381.00		NIST Webbook
rinpol	390.00		NIST Webbook
rinpol	388.38		NIST Webbook
rinpol	402.77		NIST Webbook
rinpol	402.77		NIST Webbook
rinpol	386.10		NIST Webbook
rinpol	388.38		NIST Webbook
rinpol	385.23		NIST Webbook
tb	758.28	K	Joback Method
tc	1028.40	K	Joback Method
tf	433.80 ± 2.00	K	NIST Webbook
tf	421.50 ± 5.00	K	NIST Webbook
vc	0.783	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	633.72	J/mol×K	1028.40	Joback Method
cpg	552.94	J/mol×K	758.28	Joback Method
cpg	568.99	J/mol×K	803.30	Joback Method
cpg	583.72	J/mol×K	848.32	Joback Method
cpg	597.34	J/mol×K	893.34	Joback Method
cpg	610.08	J/mol×K	938.36	Joback Method
cpg	622.13	J/mol×K	983.38	Joback Method
dvisc	0.0003497	Pa×s	758.28	Joback Method
dvisc	0.0013464	Pa×s	458.44	Joback Method
dvisc	0.0009631	Pa×s	508.41	Joback Method
dvisc	0.0007314	Pa×s	558.39	Joback Method
dvisc	0.0005812	Pa×s	608.36	Joback Method
dvisc	0.0004782	Pa×s	658.33	Joback Method
dvisc	0.0004045	Pa×s	708.31	Joback Method
hfust	19.20	kJ/mol	431.20	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C604535&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

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

Legend

chs: Standard solid 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
hfust:	Enthalpy of fusion at a given temperature
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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume