Naphthalene, 1,7-diphenyl-

Other names: 1,7-Diphenyl-naphthalene
Inchi: InChI=1S/C22H16/c1-3-8-17(9-4-1)20-15-14-19-12-7-13-21(22(19)16-20)18-10-5-2-6-11-
InchiKey: GQHLUGQTYDTQDG-UHFFFAOYSA-N
Formula: C22H16
SMILES: c1ccc(-c2ccc3cccc(-c4ccccc4)c3c2)cc1
Mol. weight [g/mol]: 280.36
CAS: 970-06-9

Physical Properties

Property code	Value	Unit	Source
gf	558.98	kJ/mol	Joback Method
hf	380.31	kJ/mol	Joback Method
hfus	31.10	kJ/mol	Joback Method
hvap	74.36	kJ/mol	Joback Method
log10ws	-8.48		Crippen Method
logp	6.174		Crippen Method
mcvol	230.100	ml/mol	McGowan Method
pc	2220.80	kPa	Joback Method
tb	811.74	K	Joback Method
tc	1087.66	K	Joback Method
tf	474.70	K	Joback Method
vc	0.866	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	641.58	J/mol×K	811.74	Joback Method
cpg	712.88	J/mol×K	1041.68	Joback Method
cpg	700.72	J/mol×K	995.69	Joback Method
cpg	687.72	J/mol×K	949.70	Joback Method
cpg	673.67	J/mol×K	903.71	Joback Method
cpg	658.36	J/mol×K	857.73	Joback Method
cpg	724.41	J/mol×K	1087.66	Joback Method
dvisc	0.0001568	Pa×s	811.74	Joback Method

dvisc	0.0001897	Pa×s	755.57	Joback Method
dvisc	0.0002367	Pa×s	699.39	Joback Method
dvisc	0.0003069	Pa×s	643.22	Joback Method
dvisc	0.0004184	Pa×s	587.05	Joback Method
dvisc	0.0006089	Pa×s	530.87	Joback Method
dvisc	0.0009686	Pa×s	474.70	Joback Method

Sources

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=C970069&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume