4,4'-Diethylbiphenyl

Inchi: InChI=1S/C16H18/c1-3-13-5-9-15(10-6-13)16-11-7-14(4-2)8-12-16/h5-12H,3-4H2,1-2H3
InchiKey: UMSGIWAAMHRVQI-UHFFFAOYSA-N
Formula: C16H18
SMILES: CCc1ccc(-c2ccc(CC)cc2)cc1
Mol. weight [g/mol]: 210.31
CAS: 13049-40-6

Physical Properties

Property code	Value	Unit	Source
gf	289.40	kJ/mol	Joback Method
hf	76.55	kJ/mol	Joback Method
hfus	24.50	kJ/mol	Joback Method
hvap	57.09	kJ/mol	Joback Method
log10ws	-5.68		Crippen Method
logp	4.478		Crippen Method
mcvol	188.780	ml/mol	McGowan Method
pc	2220.80	kPa	Joback Method
tb	586.30 ± 4.00	K	NIST Webbook
tc	860.73	K	Joback Method
tf	356.00 ± 5.00	K	NIST Webbook
tf	354.00 ± 4.00	K	NIST Webbook
tf	353.00 ± 3.00	K	NIST Webbook
vc	0.716	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	471.73	J/mol×K	628.80	Joback Method
cpg	489.89	J/mol×K	667.45	Joback Method
cpg	506.82	J/mol×K	706.11	Joback Method
cpg	522.58	J/mol×K	744.76	Joback Method
cpg	537.22	J/mol×K	783.42	Joback Method
cpg	550.82	J/mol×K	822.07	Joback Method
cpg	563.43	J/mol×K	860.73	Joback Method

dvisc	0.0014473	Pa×s	347.96	Joback Method
dvisc	0.0007888	Pa×s	394.77	Joback Method
dvisc	0.0004889	Pa×s	441.57	Joback Method
dvisc	0.0003321	Pa×s	488.38	Joback Method
dvisc	0.0002414	Pa×s	535.19	Joback Method
dvisc	0.0001847	Pa×s	581.99	Joback Method
dvisc	0.0001471	Pa×s	628.80	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=C13049406&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