1,1':4',1'':4'',1''':4''',1''''-Quinquephenyl

Other names:	p-Pentaphenyl
	p-Quinquiphenyl
	p-quinquephenyl
Inchi:	InChI=1S/C30H22/c1-3-7-23(8-4-1)25-11-15-27(16-12-25)29-19-21-30(22-20-29)28-17-1
InchiKey:	OMCUOJTVNIHQTI-UHFFFAOYSA-N
Formula:	C30H22
SMILES:	c1ccc(-c2ccc(-c3ccc(-c4ccc(-c5ccccc5)cc4)cc3)cc2)cc1
Mol. weight [g/mol]:	382.50
CAS:	3073-05-0

Physical Properties

Property code	Value	Unit	Source
gf	734.88	kJ/mol	Joback Method
hf	485.71	kJ/mol	Joback Method
hfus	42.49	kJ/mol	Joback Method
hvap	95.74	kJ/mol	Joback Method
ie	8.18 ± 0.05	eV	NIST Webbook
log10ws	-11.88		Crippen Method
logp	8.355		Crippen Method
mcvol	314.760	ml/mol	McGowan Method
pc	1615.47	kPa	Joback Method
tb	1034.14	K	Joback Method
tc	1323.15	K	Joback Method
tf	645.00 ± 6.00	K	NIST Webbook
vc	1.175	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1042.19	J/mol×K	1274.98	Joback Method
cpg	976.86	J/mol×K	1034.14	Joback Method
cpg	991.89	J/mol×K	1082.31	Joback Method
cpg	1005.67	J/mol×K	1130.48	Joback Method
cpg	1018.47	J/mol×K	1178.64	Joback Method

cpg	1030.55	J/mol×K	1226.81	Joback Method
cpg	1053.65	J/mol×K	1323.15	Joback Method
cps	455.50	J/mol×K	298.15	Isomerization effect on the heat capacities and phase behavior of oligophenyls isomers series
dvisc	0.0000317	Pa×s	1034.14	Joback Method
dvisc	0.0002934	Pa×s	597.52	Joback Method
dvisc	0.0001656	Pa×s	670.29	Joback Method
dvisc	0.0001045	Pa×s	743.06	Joback Method
dvisc	0.0000716	Pa×s	815.83	Joback Method
dvisc	0.0000522	Pa×s	888.60	Joback Method
dvisc	0.0000399	Pa×s	961.37	Joback Method
hfust	42.30	kJ/mol	659.60	NIST Webbook
sfust	64.10	J/mol×K	659.60	NIST Webbook

Sources

Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

Isomerization effect on the heat capacities and phase behavior of oligophenyls isomers series: https://www.doi.org/10.1016/j.jct.2013.03.026

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=C3073050&Units=SI

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

cpg: Ideal gas heat capacity
cps: Solid phase 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
ie: Ionization energy
log10ws: Log10 of Water solubility in mol/l
logp: Octanol/Water partition coefficient

mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
sfust:	Entropy of fusion at a given temperature
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume