1,1':2',1''-Terphenyl, 3'-phenyl-

Other names:	1,1'-Biphenyl, 2,3-diphenyl-
	1,2,3-triphenylbenzene
	3'-phenyl-1,1';2',1''-terphenyl
	Benzene, 1,2,3-triphenyl-
	Biphenyl, 2,3-diphenyl-
	m-Terphenyl, 2'-phenyl-
	o-Terphenyl, 3'-phenyl-
Inchi:	InChI=1S/C24H18/c1-4-11-19(12-5-1)22-17-10-18-23(20-13-6-2-7-14-20)24(22)21-15-8-3
InchiKey:	CHBDXRNMDNRJJC-UHFFFAOYSA-N
Formula:	C24H18
SMILES:	c1ccc(-c2cccc(-c3ccccc3)c2-c2ccccc2)cc1
Mol. weight [g/mol]:	306.40
CAS:	1165-14-6

Physical Properties

Property code	Value	Unit	Source
gf	581.58	kJ/mol	Joback Method
hf	384.49	kJ/mol	Joback Method
hfus	33.30	kJ/mol	Joback Method
hsub	134.10 ± 1.10	kJ/mol	NIST Webbook
hvap	79.45	kJ/mol	Joback Method
log10ws	-9.28		Crippen Method
logp	6.688		Crippen Method
mcvol	253.980	ml/mol	McGowan Method
pc	2014.51	kPa	Joback Method
tb	865.20	K	Joback Method
tc	1146.33	K	Joback Method
tf	490.96	K	Joback Method
vc	0.948	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	803.00	J/mol×K	1099.48	Joback Method

cpg	732.93	J/mol×K	865.20	Joback Method
cpg	749.87	J/mol×K	912.06	Joback Method
cpg	765.15	J/mol×K	958.91	Joback Method
cpg	778.96	J/mol×K	1005.77	Joback Method
cpg	791.51	J/mol×K	1052.62	Joback Method
cpg	813.64	J/mol×K	1146.33	Joback Method
cps	356.20	J/mol×K	298.15	Reassembling and testing of a high-precision heat capacity drop calorimeter. Heat capacity of some polyphenyls at T = 298.15 K
dvisc	0.0000654	Pa×s	865.20	Joback Method
dvisc	0.0006475	Pa×s	490.96	Joback Method
dvisc	0.0003563	Pa×s	553.33	Joback Method
dvisc	0.0002213	Pa×s	615.71	Joback Method
dvisc	0.0001500	Pa×s	678.08	Joback Method
dvisc	0.0001086	Pa×s	740.45	Joback Method
dvisc	0.0000827	Pa×s	802.83	Joback Method
hsubt	131.70 ± 0.60	kJ/mol	384.00	NIST Webbook

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1165146&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Reassembling and testing of a high-precision heat capacity drop calorimeter. Heat capacity of some polyphenyls at T = 298.15 K:	https://www.doi.org/10.1016/j.jct.2011.06.010
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

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

hsub:	Enthalpy of sublimation at standard conditions
hsubt:	Enthalpy of sublimation 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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume