trans-1,4-diphenylcyclohexane

Inchi: InChI=1S/C18H20/c1-3-7-15(8-4-1)17-11-13-18(14-12-17)16-9-5-2-6-10-16/h1-10,17-18H
InchiKey: VULCFZQVCFIKNK-UHFFFAOYSA-N
Formula: C18H20
SMILES: c1ccc(C2CCC(c3ccccc3)CC2)cc1
Mol. weight [g/mol]: 236.35
CAS: 21072-42-4

Physical Properties

Property code	Value	Unit	Source
affp	804.10	kJ/mol	NIST Webbook
basg	771.70	kJ/mol	NIST Webbook
gf	342.24	kJ/mol	Joback Method
hf	92.19	kJ/mol	Joback Method
hfus	23.36	kJ/mol	Joback Method
hvap	60.33	kJ/mol	Joback Method
log10ws	-5.39		Crippen Method
logp	5.128		Crippen Method
mcvol	206.100	ml/mol	McGowan Method
pc	2241.88	kPa	Joback Method
tb	679.48	K	Joback Method
tc	940.78	K	Joback Method
tf	348.60	K	Joback Method
vc	0.759	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	573.40	J/mol×K	679.48	Joback Method
cpg	596.72	J/mol×K	723.03	Joback Method
cpg	618.03	J/mol×K	766.58	Joback Method
cpg	637.43	J/mol×K	810.13	Joback Method
cpg	655.04	J/mol×K	853.68	Joback Method
cpg	670.98	J/mol×K	897.23	Joback Method
cpg	685.37	J/mol×K	940.78	Joback Method

dvisc	0.0023996	Pa×s	348.60	Joback Method
dvisc	0.0011182	Pa×s	403.75	Joback Method
dvisc	0.0006261	Pa×s	458.89	Joback Method
dvisc	0.0003970	Pa×s	514.04	Joback Method
dvisc	0.0002749	Pa×s	569.19	Joback Method
dvisc	0.0002032	Pa×s	624.33	Joback Method
dvisc	0.0001577	Pa×s	679.48	Joback Method

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C21072424&Units=SI

Legend

affp:	Proton affinity
basg:	Gas basicity
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

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