Decane, 1,10-diphenyl-

Inchi: InChI=1S/C22H30/c1(3-5-9-15-21-17-11-7-12-18-21)2-4-6-10-16-22-19-13-8-14-20-22/h7
InchiKey: SSSBYZTYRWXPNJ-UHFFFAOYSA-N
Formula: C22H30
SMILES: c1ccc(CCCCCCCCCCc2ccccc2)cc1
Mol. weight [g/mol]: 294.47
CAS: 35511-93-4

Physical Properties

Property code	Value	Unit	Source
gf	359.18	kJ/mol	Joback Method
hf	-24.35	kJ/mol	Joback Method
hfus	40.82	kJ/mol	Joback Method
hvap	69.12	kJ/mol	Joback Method
log10ws	-7.24		Crippen Method
logp	6.593		Crippen Method
mcvol	273.320	ml/mol	McGowan Method
pc	1404.84	kPa	Joback Method
tb	756.12	K	Joback Method
tc	965.23	K	Joback Method
tf	291.10 ± 1.50	K	NIST Webbook
vc	1.052	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	803.01	J/mol×K	756.12	Joback Method
cpg	822.74	J/mol×K	790.97	Joback Method
cpg	841.21	J/mol×K	825.82	Joback Method
cpg	858.50	J/mol×K	860.68	Joback Method
cpg	874.67	J/mol×K	895.53	Joback Method
cpg	889.82	J/mol×K	930.38	Joback Method
cpg	904.00	J/mol×K	965.23	Joback Method
dvisc	0.0016084	Pa×s	390.54	Joback Method
dvisc	0.0006901	Pa×s	451.47	Joback Method

dvisc	0.0003621	Pa×s	512.40	Joback Method
dvisc	0.0002179	Pa×s	573.33	Joback Method
dvisc	0.0001445	Pa×s	634.26	Joback Method
dvisc	0.0001031	Pa×s	695.19	Joback Method
dvisc	0.0000776	Pa×s	756.12	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=C35511934&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

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