Benzene, (1-methylpentadecyl)-

Other names: Hexadecane, 2-phenyl-
2-phenylhexadecane
Inchi: InChI=1S/C22H38/c1-3-4-5-6-7-8-9-10-11-12-13-15-18-21(2)22-19-16-14-17-20-22/h14,1
InchiKey: ZUXDORPHXZKYTN-UHFFFAOYSA-N
Formula: C22H38
SMILES: CCCCCCCCCCCCCCC(C)c1ccccc1
Mol. weight [g/mol]: 302.54
CAS: 13419-16-4

Physical Properties

Property code	Value	Unit	Source
gf	244.33	kJ/mol	Joback Method
hf	-266.16	kJ/mol	Joback Method
hfus	43.25	kJ/mol	Joback Method
hvap	66.45	kJ/mol	Joback Method
log10ws	-8.10		Crippen Method
logp	7.881		Crippen Method
mcvol	297.080	ml/mol	McGowan Method
pc	1117.81	kPa	Joback Method
tb	729.00	K	Joback Method
tc	913.46	K	Joback Method
tf	349.12	K	Joback Method
vc	1.153	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	885.61	J/mol×K	729.00	Joback Method
cpg	906.56	J/mol×K	759.74	Joback Method
cpg	926.42	J/mol×K	790.49	Joback Method
cpg	945.23	J/mol×K	821.23	Joback Method
cpg	963.04	J/mol×K	851.97	Joback Method
cpg	979.90	J/mol×K	882.72	Joback Method
cpg	995.86	J/mol×K	913.46	Joback Method

dvisc	0.0027423	Pa×s	349.12	Joback Method
dvisc	0.0009325	Pa×s	412.43	Joback Method
dvisc	0.0004225	Pa×s	475.75	Joback Method
dvisc	0.0002306	Pa×s	539.06	Joback Method
dvisc	0.0001429	Pa×s	602.37	Joback Method
dvisc	0.0000970	Pa×s	665.69	Joback Method
dvisc	0.0000704	Pa×s	729.00	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=C13419164&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