Benzene, (1-octyldecyl)-

Other names:	Octadecane, 9-phenyl- 10-Phenyloctadecane 9-phenyloctadecane
Inchi:	InChI=1S/C24H42/c1-3-5-7-9-11-13-16-20-23(24-21-17-14-18-22-24)19-15-12-10-8-6-4-2
InchiKey:	DPNNDICPUBVFIZ-UHFFFAOYSA-N
Formula:	C24H42
SMILES:	CCCCCCCCCC(CCCCCCCC)c1ccccc1
Mol. weight [g/mol]:	330.59
CAS:	10596-71-1

Physical Properties

Property code	Value	Unit	Source
gf	261.17	kJ/mol	Joback Method
hf	-307.44	kJ/mol	Joback Method
hfus	48.43	kJ/mol	Joback Method
hvap	70.91	kJ/mol	Joback Method
log10ws	-8.94		Crippen Method
logp	8.662		Crippen Method
mcvol	325.260	ml/mol	McGowan Method
pc	987.02	kPa	Joback Method
tb	774.76	K	Joback Method
tc	960.07	K	Joback Method
tf	371.66	K	Joback Method
vc	1.266	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1007.54	J/mol×K	774.76	Joback Method
cpg	1028.90	J/mol×K	805.64	Joback Method
cpg	1049.13	J/mol×K	836.53	Joback Method
cpg	1068.28	J/mol×K	867.41	Joback Method
cpg	1086.41	J/mol×K	898.30	Joback Method
cpg	1103.57	J/mol×K	929.18	Joback Method

cpg	1119.81	J/mol×K	960.07	Joback Method
dvisc	0.0021815	Pa×s	371.66	Joback Method
dvisc	0.0007349	Pa×s	438.84	Joback Method
dvisc	0.0003305	Pa×s	506.03	Joback Method
dvisc	0.0001792	Pa×s	573.21	Joback Method
dvisc	0.0001105	Pa×s	640.39	Joback Method
dvisc	0.0000747	Pa×s	707.58	Joback Method
dvisc	0.0000540	Pa×s	774.76	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=C10596711&Units=SI

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