Benzene, (1-heptyloctyl)-

Other names: Pentadecane, 8-phenyl-
8-phenylpentadecane
Inchi: InChI=1S/C21H36/c1-3-5-7-9-12-16-20(17-13-10-8-6-4-2)21-18-14-11-15-19-21/h11,14-1
InchiKey: RECLSKJUKJFZCW-UHFFFAOYSA-N
Formula: C21H36
SMILES: CCCCCCCC(CCCCCCC)c1ccccc1
Mol. weight [g/mol]: 288.51
CAS: 4534-60-5

Physical Properties

Property code	Value	Unit	Source
gf	235.91	kJ/mol	Joback Method
hf	-245.52	kJ/mol	Joback Method
hfus	40.66	kJ/mol	Joback Method
hvap	64.23	kJ/mol	Joback Method
log10ws	-7.68		Crippen Method
logp	7.491		Crippen Method
mcvol	282.990	ml/mol	McGowan Method
pc	1193.17	kPa	Joback Method
tb	706.12	K	Joback Method
tc	890.97	K	Joback Method
tf	337.85	K	Joback Method
vc	1.097	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	826.04	J/mol×K	706.12	Joback Method
cpg	846.80	J/mol×K	736.93	Joback Method
cpg	866.48	J/mol×K	767.74	Joback Method
cpg	885.12	J/mol×K	798.54	Joback Method
cpg	902.78	J/mol×K	829.35	Joback Method
cpg	919.49	J/mol×K	860.16	Joback Method
cpg	935.30	J/mol×K	890.97	Joback Method

dvisc	0.0030527	Pa×s	337.85	Joback Method
dvisc	0.0010434	Pa×s	399.23	Joback Method
dvisc	0.0004748	Pa×s	460.61	Joback Method
dvisc	0.0002600	Pa×s	521.99	Joback Method
dvisc	0.0001616	Pa×s	583.36	Joback Method
dvisc	0.0001100	Pa×s	644.74	Joback Method
dvisc	0.0000800	Pa×s	706.12	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=C4534605&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

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