

Benzene, (1-ethyldodecyl)-

Other names:	Tetradecane, 3-phenyl- 3-Phenyltetradecane
Inchi:	InChI=1S/C20H34/c1-3-5-6-7-8-9-10-11-13-16-19(4-2)20-17-14-12-15-18-20/h12,14-15,1
InchiKey:	ILOABSZOHZMWLD-UHFFFAOYSA-N
Formula:	C20H34
SMILES:	CCCCCCCCCCCC(CC)c1ccccc1
Mol. weight [g/mol]:	274.48
CAS:	4534-58-1

Physical Properties

Property code	Value	Unit	Source
gf	227.49	kJ/mol	Joback Method
hf	-224.88	kJ/mol	Joback Method
hfus	38.07	kJ/mol	Joback Method
hvap	62.00	kJ/mol	Joback Method
log10ws	-7.26		Crippen Method
logp	7.101		Crippen Method
mvol	268.900	ml/mol	McGowan Method
pc	1276.42	kPa	Joback Method
tb	683.24	K	Joback Method
tc	868.95	K	Joback Method
tf	326.58	K	Joback Method
vc	1.042	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	767.49	J/mol×K	683.24	Joback Method
cpg	788.06	J/mol×K	714.19	Joback Method
cpg	807.55	J/mol×K	745.14	Joback Method
cpg	826.02	J/mol×K	776.09	Joback Method
cpg	843.51	J/mol×K	807.04	Joback Method
cpg	860.06	J/mol×K	837.99	Joback Method
cpg	875.71	J/mol×K	868.95	Joback Method

dvisc	0.0033798	Paxs	326.58	Joback Method
dvisc	0.0011617	Paxs	386.02	Joback Method
dvisc	0.0005310	Paxs	445.47	Joback Method
dvisc	0.0002918	Paxs	504.91	Joback Method
dvisc	0.0001819	Paxs	564.35	Joback Method
dvisc	0.0001241	Paxs	623.80	Joback Method
dvisc	0.0000905	Paxs	683.24	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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=C4534581&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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