Benzene, (1-methyltridecyl)-

Other names: Tetradecane, 2-phenyl-
2-Phenyltetradecane
Inchi: InChI=1S/C20H34/c1-3-4-5-6-7-8-9-10-11-13-16-19(2)20-17-14-12-15-18-20/h12,14-15,1
InchiKey: GDFUGKICRHMMOT-UHFFFAOYSA-N
Formula: C20H34
SMILES: CCCCCCCCCCCCC(C)c1ccccc1
Mol. weight [g/mol]: 274.48
CAS: 4534-59-2

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
mcvol	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	266.00 ± 1.00	K	NIST Webbook
vc	1.042	m3/kmol	Joback Method

Temperature Dependent Properties

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

dvisc	0.0000905	Pa×s	683.24	Joback Method
dvisc	0.0001241	Pa×s	623.80	Joback Method
dvisc	0.0001819	Pa×s	564.35	Joback Method
dvisc	0.0002918	Pa×s	504.91	Joback Method
dvisc	0.0005310	Pa×s	445.47	Joback Method
dvisc	0.0011617	Pa×s	386.02	Joback Method
dvisc	0.0033798	Pa×s	326.58	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=C4534592&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