Benzene, 1-(1-heptyldodecyl)-4-methyl-

Other names:	1-Methyl-4-(1'-n-heptyldodecyl)benzene
	8-(4'-Methylphenyl)nonadecane
	8-(4-Tolyl)nonadecane
	8-p-Tolylnonadecane
Inchi:	InChI=1S/C26H46/c1-4-6-8-10-11-12-13-15-17-19-25(18-16-14-9-7-5-2)26-22-20-24(3)21
InchiKey:	OGAMHWGABJDLOK-UHFFFAOYSA-N
Formula:	C26H46
SMILES:	CCCCCCCCCCCC(CCCCCCC)c1ccc(C)cc1
Mol. weight [g/mol]:	358.64
CAS:	55191-36-1

Physical Properties

Property code	Value	Unit	Source
gf	268.38	kJ/mol	Joback Method
hf	-360.19	kJ/mol	Joback Method
hfus	53.23	kJ/mol	Joback Method
hvap	76.02	kJ/mol	Joback Method
log10ws	-9.83		Crippen Method
logp	9.360		Crippen Method
mcvol	353.440	ml/mol	McGowan Method
pc	870.16	kPa	Joback Method
tb	825.50	K	Joback Method
tc	1015.12	K	Joback Method
tf	281.85 ± 0.50	K	NIST Webbook
vc	1.377	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1247.43	J/mol×K	1015.12	Joback Method
cpg	1133.18	J/mol×K	825.50	Joback Method
cpg	1154.99	J/mol×K	857.10	Joback Method
cpg	1175.61	J/mol×K	888.71	Joback Method
cpg	1195.11	J/mol×K	920.31	Joback Method

cpg	1213.54	J/mol×K	951.91	Joback Method
cpg	1230.96	J/mol×K	983.51	Joback Method
dvisc	0.0000414	Pa×s	825.50	Joback Method
dvisc	0.0013255	Pa×s	406.72	Joback Method
dvisc	0.0004873	Pa×s	476.52	Joback Method
dvisc	0.0002313	Pa×s	546.31	Joback Method
dvisc	0.0001300	Pa×s	616.11	Joback Method
dvisc	0.0000822	Pa×s	685.91	Joback Method
dvisc	0.0000565	Pa×s	755.70	Joback Method
hvapt	94.50	kJ/mol	499.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.34346e+01
Coeff. B	-5.03108e+03
Coeff. C	-1.28522e+02
Temperature range (K), min.	511.20
Temperature range (K), max.	747.87

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=C55191361&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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
hvapt:	Enthalpy of vaporization at a given temperature
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume