Benzene, 1,4-dimethyl-2-octadecyl-

Other names: 1-(2,5-Dimethylphenyl)octadecane
1-(2,5-Xylyl)octadecane
1,4-Dimethyl-3-n-octadecylbenzene
Inchi: InChI=1S/C26H46/c1-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-26-23-24(2)21-22-
InchiKey: AHLSQOVUIXALIJ-UHFFFAOYSA-N
Formula: C26H46
SMILES: CCCCCCCCCCCCCCCCCCc1cc(C)ccc1C
Mol. weight [g/mol]: 358.64
CAS: 55191-39-4

Physical Properties

Property code	Value	Unit	Source
gf	261.19	kJ/mol	Joback Method
hf	-366.38	kJ/mol	Joback Method
hfus	56.36	kJ/mol	Joback Method
hvap	77.07	kJ/mol	Joback Method
log10ws	-9.92		Crippen Method
logp	9.107		Crippen Method
mcvol	353.440	ml/mol	McGowan Method
pc	858.47	kPa	Joback Method
tb	830.92	K	Joback Method
tc	1020.58	K	Joback Method
tf	434.24	K	Joback Method
vc	1.383	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1133.14	J/mol×K	830.92	Joback Method
cpg	1230.27	J/mol×K	988.97	Joback Method
cpg	1212.95	J/mol×K	957.36	Joback Method
cpg	1194.63	J/mol×K	925.75	Joback Method
cpg	1175.26	J/mol×K	894.14	Joback Method
cpg	1154.78	J/mol×K	862.53	Joback Method

cpg	1246.64	J/mol×K	1020.58	Joback Method
dvisc	0.0000457	Pa×s	830.92	Joback Method
dvisc	0.0000605	Pa×s	764.81	Joback Method
dvisc	0.0000844	Pa×s	698.69	Joback Method
dvisc	0.0001262	Pa×s	632.58	Joback Method
dvisc	0.0002072	Pa×s	566.47	Joback Method
dvisc	0.0003880	Pa×s	500.35	Joback Method
dvisc	0.0008796	Pa×s	434.24	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=C55191394&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