Benzene, 1,3-didecyl-

Other names: 1,3-Di-n-decylbenzene
Inchi: InChI=1S/C26H46/c1-3-5-7-9-11-13-15-17-20-25-22-19-23-26(24-25)21-18-16-14-12-10-
InchiKey: AUCYVPAWNAGPDL-UHFFFAOYSA-N
Formula: C26H46
SMILES: CCCCCCCCCCc1cccc(CCCCCCCCCC)c1
Mol. weight [g/mol]: 358.64
CAS: 55191-38-3

Physical Properties

Property code	Value	Unit	Source
gf	270.82	kJ/mol	Joback Method
hf	-354.91	kJ/mol	Joback Method
hfus	56.75	kJ/mol	Joback Method
hvap	76.41	kJ/mol	Joback Method
log10ws	-9.77		Crippen Method
logp	9.053		Crippen Method
mcvol	353.440	ml/mol	McGowan Method
pc	866.07	kPa	Joback Method
tb	825.94	K	Joback Method
tc	1014.63	K	Joback Method
tf	421.72	K	Joback Method
vc	1.383	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1132.75	J/mol×K	825.94	Joback Method
cpg	1230.21	J/mol×K	983.18	Joback Method
cpg	1212.82	J/mol×K	951.73	Joback Method
cpg	1194.43	J/mol×K	920.29	Joback Method
cpg	1174.99	J/mol×K	888.84	Joback Method
cpg	1154.45	J/mol×K	857.39	Joback Method
cpg	1246.67	J/mol×K	1014.63	Joback Method
dvisc	0.0000452	Pa×s	825.94	Joback Method

dvisc	0.0000606	Pa×s	758.57	Joback Method
dvisc	0.0000862	Pa×s	691.20	Joback Method
dvisc	0.0001323	Pa×s	623.83	Joback Method
dvisc	0.0002253	Pa×s	556.46	Joback Method
dvisc	0.0004439	Pa×s	489.09	Joback Method
dvisc	0.0010867	Pa×s	421.72	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C55191383&Units=SI
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

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