Benzene, (1,1-dimethyldecyl)-

Other names: Undecane, 2-methyl-2-phenyl-
(1,1-Dimethyldecyl)benzene
2-Methyl-2-phenylundecane
Inchi: InChI=1S/C18H30/c1-4-5-6-7-8-9-13-16-18(2,3)17-14-11-10-12-15-17/h10-12,14-15H,4-9
InchiKey: FZUMQFUHECRZDF-UHFFFAOYSA-N
Formula: C18H30
SMILES: CCCCCCCCCC(C)(C)c1ccccc1
Mol. weight [g/mol]: 246.43
CAS: 27854-40-6

Physical Properties

Property code	Value	Unit	Source
gf	215.93	kJ/mol	Joback Method
hf	-187.07	kJ/mol	Joback Method
hfus	29.00	kJ/mol	Joback Method
hvap	56.64	kJ/mol	Joback Method
log10ws	-6.13		Crippen Method
logp	6.105		Crippen Method
mcvol	240.720	ml/mol	McGowan Method
pc	1483.85	kPa	Joback Method
tb	634.69	K	Joback Method
tc	829.36	K	Joback Method
tf	321.46	K	Joback Method
vc	0.924	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	655.85	J/mol×K	634.69	Joback Method
cpg	676.44	J/mol×K	667.13	Joback Method
cpg	695.86	J/mol×K	699.58	Joback Method
cpg	714.16	J/mol×K	732.02	Joback Method
cpg	731.42	J/mol×K	764.47	Joback Method
cpg	747.69	J/mol×K	796.91	Joback Method

cpg	763.03	J/mol×K	829.36	Joback Method
dvisc	0.0035370	Pa×s	321.46	Joback Method
dvisc	0.0013135	Pa×s	373.67	Joback Method
dvisc	0.0006218	Pa×s	425.87	Joback Method
dvisc	0.0003466	Pa×s	478.07	Joback Method
dvisc	0.0002168	Pa×s	530.28	Joback Method
dvisc	0.0001475	Pa×s	582.48	Joback Method
dvisc	0.0001069	Pa×s	634.69	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=C27854406&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