Acenaphthylene, 1,2-dihydro-5-pentadecyl-

Other names: 5-Pentadecylacenaphthene
Inchi: InChI=1S/C27H40/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-16-23-19-20-25-22-21-24-17-15-18
InchiKey: BTWSHSRQUSIAIC-UHFFFAOYSA-N
Formula: C27H40
SMILES: CCCCCCCCCCCCCCCc1ccc2c3c(cccc13)CC2
Mol. weight [g/mol]: 364.61
CAS: 55334-13-9

Physical Properties

Property code	Value	Unit	Source
gf	447.19	kJ/mol	Joback Method
hf	-108.12	kJ/mol	Joback Method
hfus	54.74	kJ/mol	Joback Method
hvap	81.65	kJ/mol	Joback Method
log10ws	-10.18		Crippen Method
logp	8.572		Crippen Method
mcvol	337.210	ml/mol	McGowan Method
pc	1013.59	kPa	Joback Method
tb	884.90	K	Joback Method
tc	1090.15	K	Joback Method
tf	516.43	K	Joback Method
vc	1.327	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1100.81	J/mol×K	884.90	Joback Method
cpg	1120.85	J/mol×K	919.11	Joback Method
cpg	1140.07	J/mol×K	953.32	Joback Method
cpg	1158.56	J/mol×K	987.53	Joback Method
cpg	1176.47	J/mol×K	1021.73	Joback Method
cpg	1193.89	J/mol×K	1055.94	Joback Method
cpg	1210.96	J/mol×K	1090.15	Joback Method
dvisc	0.0013993	Pa×s	516.43	Joback Method

dvisc	0.0009361	Pa×s	577.84	Joback Method
dvisc	0.0006765	Pa×s	639.25	Joback Method
dvisc	0.0005176	Pa×s	700.67	Joback Method
dvisc	0.0004134	Pa×s	762.08	Joback Method
dvisc	0.0003415	Pa×s	823.49	Joback Method
dvisc	0.0002897	Pa×s	884.90	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=C55334139&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