Naphthalene, 1,2,3,4-tetrahydro-2-(1-naphthalenylmethyl)-

Other names: 1',2',3',4'-Tetrahydro-1,2-dinaphthylmethane
Inchi: InChI=1S/C21H20/c1-2-8-19-14-16(12-13-17(19)6-1)15-20-10-5-9-18-7-3-4-11-21(18)20/
InchiKey: PXYDLIUAIBQLBW-UHFFFAOYSA-N
Formula: C21H20
SMILES: c1ccc2c(c1)CCC(Cc1cccc3ccccc13)C2
Mol. weight [g/mol]: 272.38
CAS: 56818-06-5

Physical Properties

Property code	Value	Unit	Source
chs	-11166.20 ± 1.50	kJ/mol	NIST Webbook
gf	486.80	kJ/mol	Joback Method
hf	231.06	kJ/mol	Joback Method
hfs	44.10 ± 1.80	kJ/mol	NIST Webbook
hfus	30.50	kJ/mol	Joback Method
hvap	69.94	kJ/mol	Joback Method
log10ws	-6.57		Crippen Method
logp	5.187		Crippen Method
mcvol	228.910	ml/mol	McGowan Method
pc	2062.36	kPa	Joback Method
tb	773.19	K	Joback Method
tc	1031.80	K	Joback Method
tf	451.43	K	Joback Method
vc	0.867	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	664.55	J/mol×K	773.19	Joback Method
cpg	683.60	J/mol×K	816.29	Joback Method
cpg	701.15	J/mol×K	859.39	Joback Method
cpg	717.40	J/mol×K	902.49	Joback Method
cpg	732.54	J/mol×K	945.59	Joback Method
cpg	746.75	J/mol×K	988.70	Joback Method

cpg	760.21	J/mol×K	1031.80	Joback Method
dvisc	0.0015979	Pa×s	451.43	Joback Method
dvisc	0.0010834	Pa×s	505.06	Joback Method
dvisc	0.0007914	Pa×s	558.68	Joback Method
dvisc	0.0006109	Pa×s	612.31	Joback Method
dvisc	0.0004916	Pa×s	665.94	Joback Method
dvisc	0.0004086	Pa×s	719.56	Joback Method
dvisc	0.0003484	Pa×s	773.19	Joback Method

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=C56818065&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

chs: Standard solid enthalpy of combustion
cpg: Ideal gas heat capacity
dvisc: Dynamic viscosity
gf: Standard Gibbs free energy of formation
hf: Enthalpy of formation at standard conditions
hfs: Solid phase 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