Naphthalene, 1,1'-ethylidenebis[decahydro-

Other names: 1,1-Di(decahydro-1-naphthyl)ethane
1,1-Di(1'-decahydronaphthyl)ethane
Naphthalene, 1,1'-ethylidenebis*decahydro-
Ethane, 1,1-bis(decahydro-1-naphthyl)-
1,1-bis(decahydro-1-naphthyl)ethane
Inchi: InChI=1S/C22H38/c1-16(19-14-6-10-17-8-2-4-12-21(17)19)20-15-7-11-18-9-3-5-13-22(18
InchiKey: JVIQTBIIJRVXBJ-UHFFFAOYSA-N
Formula: C22H38
SMILES: CC(C1CCCC2CCCCC21)C1CCCC2CCCCC21
Mol. weight [g/mol]: 302.54
CAS: 54934-70-2

Physical Properties

Property code	Value	Unit	Source
gf	262.70	kJ/mol	Joback Method
hf	-301.45	kJ/mol	Joback Method
hfus	27.09	kJ/mol	Joback Method
hvap	64.59	kJ/mol	Joback Method
log10ws	-6.92		Crippen Method
logp	6.835		Crippen Method
mcvol	277.400	ml/mol	McGowan Method
pc	1404.84	kPa	Joback Method
tb	754.10	K	Joback Method
tc	992.52	K	Joback Method
tf	357.82	K	Joback Method
vc	1.024	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	947.01	J/mol×K	754.10	Joback Method
cpg	977.52	J/mol×K	793.84	Joback Method
cpg	1005.69	J/mol×K	833.57	Joback Method
cpg	1031.67	J/mol×K	873.31	Joback Method

cpg	1055.59	J/mol×K	913.05	Joback Method
cpg	1077.58	J/mol×K	952.79	Joback Method
cpg	1097.76	J/mol×K	992.52	Joback Method
dvisc	0.0049633	Pa×s	357.82	Joback Method
dvisc	0.0025074	Pa×s	423.87	Joback Method
dvisc	0.0015228	Pa×s	489.91	Joback Method
dvisc	0.0010412	Pa×s	555.96	Joback Method
dvisc	0.0007717	Pa×s	622.01	Joback Method
dvisc	0.0006059	Pa×s	688.05	Joback Method
dvisc	0.0004962	Pa×s	754.10	Joback Method
hvapt	77.30	kJ/mol	467.50	NIST Webbook

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=C54934702&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
hvapt: Enthalpy of vaporization at a given temperature
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