Naphthalene, 1,2,3,4-tetrahydro-5,7-dimethyl-

Other names: 5,7-Dimethyltetralin
5,7-Dimethyl-(1,2,3,4-tetrahydronaphthalene)
Inchi: InChI=1S/C12H16/c1-9-7-10(2)12-6-4-3-5-11(12)8-9/h7-8H,3-6H2,1-2H3
InchiKey: MDAXYSXRAMOWLY-UHFFFAOYSA-N
Formula: C12H16
SMILES: Cc1cc(C)c2c(c1)CCCC2
Mol. weight [g/mol]: 160.26
CAS: 21693-54-9

Physical Properties

Property code	Value	Unit	Source
gf	190.04	kJ/mol	Joback Method
hf	-1.91	kJ/mol	Joback Method
hfus	14.67	kJ/mol	Joback Method
hvap	46.96	kJ/mol	Joback Method
log10ws	-3.92		Crippen Method
logp	3.182		Crippen Method
mcvol	145.320	ml/mol	McGowan Method
pc	2781.78	kPa	Joback Method
rinpol	1374.00		NIST Webbook
rinpol	1383.00		NIST Webbook
rinpol	1374.00		NIST Webbook
rinpol	1383.00		NIST Webbook
tb	531.26	K	Joback Method
tc	758.15	K	Joback Method
tf	307.64	K	Joback Method
vc	0.549	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	332.48	J/mol×K	531.26	Joback Method
cpg	409.22	J/mol×K	720.34	Joback Method
cpg	395.82	J/mol×K	682.52	Joback Method

cpg	381.50	J/mol×K	644.71	Joback Method
cpg	366.21	J/mol×K	606.89	Joback Method
cpg	349.89	J/mol×K	569.08	Joback Method
cpg	421.77	J/mol×K	758.15	Joback Method
dvisc	0.0002947	Pa×s	531.26	Joback Method
dvisc	0.0003527	Pa×s	493.99	Joback Method
dvisc	0.0004346	Pa×s	456.72	Joback Method
dvisc	0.0005560	Pa×s	419.45	Joback Method
dvisc	0.0007461	Pa×s	382.18	Joback Method
dvisc	0.0010670	Pa×s	344.91	Joback Method
dvisc	0.0016640	Pa×s	307.64	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C21693549&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
McGowan Method: http://link.springer.com/article/10.1007/BF02311772

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
rinpol: Non-polar retention indices
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume