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

Other names:	1,4-Dimethyltetralin
	1,4-Dimethyl-1,2,3,4-tetrahydronaphthalene
	1,2,3,4-Tetrahydro-1,4-dimethyl-naphthalene
Inchi:	InChI=1S/C12H16/c1-9-7-8-10(2)12-6-4-3-5-11(9)12/h3-6,9-10H,7-8H2,1-2H3
InchiKey:	KNQXALMJMHIHQH-UHFFFAOYSA-N
Formula:	C12H16
SMILES:	CC1CCC(C)c2ccccc21
Mol. weight [g/mol]:	160.26
CAS:	4175-54-6

Physical Properties

Property code	Value	Unit	Source
gf	193.88	kJ/mol	Joback Method
hf	-19.65	kJ/mol	Joback Method
hfus	17.59	kJ/mol	Joback Method
hvap	45.02	kJ/mol	Joback Method
log10ws	-3.74		Crippen Method
logp	3.687		Crippen Method
mcvol	145.320	ml/mol	McGowan Method
pc	2679.08	kPa	Joback Method
rinpol	1258.00		NIST Webbook
rinpol	238.18		NIST Webbook
tb	511.96	K	Joback Method
tc	736.26	K	Joback Method
tf	274.12	K	Joback Method
vc	0.547	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	333.23	J/mol×K	511.96	Joback Method
cpg	352.36	J/mol×K	549.34	Joback Method
cpg	370.29	J/mol×K	586.73	Joback Method
cpg	387.09	J/mol×K	624.11	Joback Method

cpg	402.81	J/mol×K	661.49	Joback Method
cpg	417.50	J/mol×K	698.88	Joback Method
cpg	431.22	J/mol×K	736.26	Joback Method
dvisc	0.0015667	Pa×s	274.12	Joback Method
dvisc	0.0010480	Pa×s	313.76	Joback Method
dvisc	0.0007672	Pa×s	353.40	Joback Method
dvisc	0.0005981	Pa×s	393.04	Joback Method
dvisc	0.0004881	Pa×s	432.68	Joback Method
dvisc	0.0004121	Pa×s	472.32	Joback Method
dvisc	0.0003572	Pa×s	511.96	Joback Method

Sources

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=C4175546&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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