

Naphthalene, 1,2,3,4-tetrahydro-5-methyl-

Other names:	5-Methyltetralin 5-Methyl-1,2,3,4-tetrahydronaphthalene 1-Methyl-5,6,7,8-tetrahydronaphthalene 1,2,3,4-Tetrahydro-5-methyl-naphthalene Tetraline, 5-methyl
Inchi:	InChI=1S/C11H14/c1-9-5-4-7-10-6-2-3-8-11(9)10/h4-5,7H,2-3,6,8H2,1H3
InchiKey:	YXOVIGZJPGLNGM-UHFFFAOYSA-N
Formula:	C11H14
SMILES:	Cc1cccc2c1CCCC2
Mol. weight [g/mol]:	146.23
CAS:	2809-64-5

Physical Properties

Property code	Value	Unit	Source
chl	-5962.00	kJ/mol	NIST Webbook
gf	191.25	kJ/mol	Joback Method
hf	30.20	kJ/mol	Joback Method
hfus	12.47	kJ/mol	Joback Method
hvap	44.07	kJ/mol	Joback Method
log10ws	-3.45		Crippen Method
logp	2.874		Crippen Method
mcvol	131.230	ml/mol	McGowan Method
pc	3138.51	kPa	Joback Method
rinpol	1272.00		NIST Webbook
rinpol	1261.00		NIST Webbook
rinpol	1279.00		NIST Webbook
rinpol	1294.00		NIST Webbook
rinpol	1294.00		NIST Webbook
rinpol	215.59		NIST Webbook
rinpol	1288.00		NIST Webbook
rinpol	1279.00		NIST Webbook
rinpol	1288.00		NIST Webbook
rinpol	215.59		NIST Webbook
tb	507.35 ± 0.30	K	NIST Webbook
tb	507.20	K	NIST Webbook
tc	733.22	K	Joback Method
tf	250.10 ± 0.20	K	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	372.48	J/molxK	733.22	Joback Method
cpg	286.10	J/molxK	503.40	Joback Method
cpg	303.12	J/molxK	541.70	Joback Method
cpg	319.01	J/molxK	580.01	Joback Method
cpg	333.82	J/molxK	618.31	Joback Method
cpg	347.63	J/molxK	656.62	Joback Method
cpg	360.49	J/molxK	694.92	Joback Method
dvisc	0.0003129	Paxs	503.40	Joback Method
dvisc	0.0020466	Paxs	283.85	Joback Method
dvisc	0.0012516	Paxs	320.44	Joback Method
dvisc	0.0008466	Paxs	357.03	Joback Method
dvisc	0.0006158	Paxs	393.62	Joback Method
dvisc	0.0004729	Paxs	430.22	Joback Method
dvisc	0.0003785	Paxs	466.81	Joback Method
hvapt	53.40	kJ/mol	462.00	NIST Webbook

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C2809645&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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

chl:	Standard liquid 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

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

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