

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

Other names:	1-Propyltetralin Tetraline, 1-propyl
Inchi:	InChI=1S/C13H18/c1-2-6-11-8-5-9-12-7-3-4-10-13(11)12/h3-4,7,10-11H,2,5-6,8-9H2,1H3
InchiKey:	IXWKFZUCCKIXFH-UHFFFAOYSA-N
Formula:	C13H18
SMILES:	CCCC1CCCc2cccc21
Mol. weight [g/mol]:	174.28
CAS:	66324-83-2

Physical Properties

Property code	Value	Unit	Source
gf	210.01	kJ/mol	Joback Method
hf	-19.95	kJ/mol	Joback Method
hfus	19.11	kJ/mol	Joback Method
hvap	47.56	kJ/mol	Joback Method
log10ws	-4.19		Crippen Method
logp	3.907		Crippen Method
mcvol	159.410	ml/mol	McGowan Method
pc	2512.55	kPa	Joback Method
rinpol	1397.65		NIST Webbook
rinpol	1403.17		NIST Webbook
rinpol	1417.18		NIST Webbook
rinpol	1432.88		NIST Webbook
rinpol	1404.00		NIST Webbook
rinpol	1404.00		NIST Webbook
rinpol	1389.24		NIST Webbook
rinpol	1426.61		NIST Webbook
tb	539.51	K	Joback Method
tc	760.00	K	Joback Method
tf	289.63	K	Joback Method
vc	0.605	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	380.48	J/mol×K	539.51	Joback Method
cpg	465.30	J/mol×K	723.26	Joback Method
cpg	450.53	J/mol×K	686.51	Joback Method
cpg	434.72	J/mol×K	649.76	Joback Method
cpg	417.82	J/mol×K	613.01	Joback Method
cpg	399.76	J/mol×K	576.26	Joback Method
cpg	479.11	J/mol×K	760.00	Joback Method
dvisc	0.0003240	Paxs	539.51	Joback Method
dvisc	0.0003911	Paxs	497.86	Joback Method
dvisc	0.0004887	Paxs	456.22	Joback Method
dvisc	0.0006385	Paxs	414.57	Joback Method
dvisc	0.0008855	Paxs	372.92	Joback Method
dvisc	0.0013334	Paxs	331.28	Joback Method
dvisc	0.0022586	Paxs	289.63	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=C66324832&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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

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