

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

Other names:	1-Ethyltetralin Tetraline, 1-ethyl
Inchi:	InChI=1S/C12H16/c1-2-10-7-5-8-11-6-3-4-9-12(10)11/h3-4,6,9-10H,2,5,7-8H2,1H3
InchiKey:	AXLCNVVQTVIXDG-UHFFFAOYSA-N
Formula:	C12H16
SMILES:	CCC1CCCc2ccccc21
Mol. weight [g/mol]:	160.26
CAS:	13556-58-6

Physical Properties

Property code	Value	Unit	Source
chl	-6920.80	kJ/mol	NIST Webbook
gf	201.59	kJ/mol	Joback Method
hf	0.69	kJ/mol	Joback Method
hfus	16.52	kJ/mol	Joback Method
hvap	45.33	kJ/mol	Joback Method
log10ws	-3.77		Crippen Method
logp	3.516		Crippen Method
mcvol	145.320	ml/mol	McGowan Method
pc	2773.00	kPa	Joback Method
rinpol	1337.31		NIST Webbook
rinpol	1324.00		NIST Webbook
rinpol	1293.93		NIST Webbook
rinpol	1321.92		NIST Webbook
rinpol	1308.09		NIST Webbook
rinpol	1302.33		NIST Webbook
rinpol	1324.00		NIST Webbook
rinpol	1293.93		NIST Webbook
rinpol	1331.29		NIST Webbook
rinpol	1337.31		NIST Webbook
tb	512.55 ± 0.40	K	NIST Webbook
tb	512.61 ± 0.15	K	NIST Webbook
tc	741.05	K	Joback Method
tf	278.36	K	Joback Method
vc	0.548	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	332.53	J/molxK	516.63	Joback Method
cpg	351.20	J/molxK	554.03	Joback Method
cpg	368.65	J/molxK	591.44	Joback Method
cpg	384.96	J/molxK	628.84	Joback Method
cpg	400.19	J/molxK	666.24	Joback Method
cpg	414.40	J/molxK	703.65	Joback Method
cpg	427.65	J/molxK	741.05	Joback Method
dvisc	0.0021411	Paxs	278.36	Joback Method
dvisc	0.0012955	Paxs	318.07	Joback Method
dvisc	0.0008764	Paxs	357.78	Joback Method
dvisc	0.0006410	Paxs	397.50	Joback Method
dvisc	0.0004963	Paxs	437.21	Joback Method
dvisc	0.0004009	Paxs	476.92	Joback Method
dvisc	0.0003347	Paxs	516.63	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C13556586&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

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
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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