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

Other names:	5-Ethyltetralin
	5-Ethyltetraline
	Tetraline, 5-ethyl
Inchi:	InChI=1S/C12H16/c1-2-10-7-5-8-11-6-3-4-9-12(10)11/h5,7-8H,2-4,6,9H2,1H3
InchiKey:	WHCKFZOMBDMRLO-UHFFFAOYSA-N
Formula:	C12H16
SMILES:	CCc1cccc2c1CCCC2
Mol. weight [g/mol]:	160.26
CAS:	42775-75-7

Physical Properties

Property code	Value	Unit	Source
chl	-6569.00	kJ/mol	NIST Webbook
gf	199.67	kJ/mol	Joback Method
hf	9.56	kJ/mol	Joback Method
hfus	15.06	kJ/mol	Joback Method
hvap	46.30	kJ/mol	Joback Method
log10ws	-3.77		Crippen Method
logp	3.128		Crippen Method
mcvol	145.320	ml/mol	McGowan Method
pc	2826.33	kPa	Joback Method
rinpol	1362.00		NIST Webbook
rinpol	1354.00		NIST Webbook
rinpol	1354.00		NIST Webbook
tb	521.17 ± 0.30	K	NIST Webbook
tc	752.00	K	Joback Method
tf	228.60 ± 0.20	K	NIST Webbook
vc	0.549	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	332.17	J/mol×K	526.28	Joback Method
cpg	349.96	J/mol×K	563.90	Joback Method

cpg	366.60	J/mol×K	601.52	Joback Method
cpg	382.14	J/mol×K	639.14	Joback Method
cpg	396.66	J/mol×K	676.76	Joback Method
cpg	410.22	J/mol×K	714.38	Joback Method
cpg	422.89	J/mol×K	752.00	Joback Method
dvisc	0.0021455	Pa×s	295.12	Joback Method
dvisc	0.0012818	Pa×s	333.65	Joback Method
dvisc	0.0008520	Pa×s	372.17	Joback Method
dvisc	0.0006114	Pa×s	410.70	Joback Method
dvisc	0.0004645	Pa×s	449.23	Joback Method
dvisc	0.0003685	Pa×s	487.75	Joback Method
dvisc	0.0003024	Pa×s	526.28	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C42775757&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