Naphthalene, 1,2,3,4-tetrahydro-2,5,8-trimethyl-

Other names: 1,2,3,4-Tetrahydro-2,5,8-trimethylnaphthalene
2,5,8-Trimethyl-1,2,3,4-tetrahydronaphthalene
2,5,8-Trimethyltetralin

Inchi: InChI=1S/C13H18/c1-9-4-7-12-10(2)5-6-11(3)13(12)8-9/h5-6,9H,4,7-8H2,1-3H3

InchiKey: CMWCSSCXHBQEPX-UHFFFAOYSA-N

Formula: C13H18

SMILES: Cc1ccc(C)c2c1CCC(C)C2

Mol. weight [g/mol]: 174.28

CAS: 30316-17-7

Physical Properties

Property code	Value	Unit	Source
chl	-7552.50 ± 0.92	kJ/mol	NIST Webbook
gf	190.75	kJ/mol	Joback Method
hf	-42.89	kJ/mol	Joback Method
hfl	-135.60 ± 1.20	kJ/mol	NIST Webbook
hfus	18.34	kJ/mol	Joback Method
hvap	48.88	kJ/mol	Joback Method
log10ws	-4.10		Crippen Method
logp	3.428		Crippen Method
mcvol	159.410	ml/mol	McGowan Method
pc	2438.65	kPa	Joback Method
tb	549.47	K	Joback Method
tc	772.19	K	Joback Method
tf	314.67	K	Joback Method
vc	0.605	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	381.28	J/mol×K	549.47	Joback Method
cpg	463.67	J/mol×K	735.07	Joback Method
cpg	449.19	J/mol×K	697.95	Joback Method
cpg	433.76	J/mol×K	660.83	Joback Method

cpg	417.33	J/mol×K	623.71	Joback Method
cpg	399.86	J/mol×K	586.59	Joback Method
cpg	477.25	J/mol×K	772.19	Joback Method
dvisc	0.0003115	Pa×s	549.47	Joback Method
dvisc	0.0003638	Pa×s	510.34	Joback Method
dvisc	0.0004359	Pa×s	471.20	Joback Method
dvisc	0.0005398	Pa×s	432.07	Joback Method
dvisc	0.0006974	Pa×s	392.94	Joback Method
dvisc	0.0009537	Pa×s	353.80	Joback Method
dvisc	0.0014096	Pa×s	314.67	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.33185e+01
Coeff. B	-3.92519e+03
Coeff. C	-8.72710e+01
Temperature range (K), min.	388.49
Temperature range (K), max.	577.49

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C30316177&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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

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
hfl:	Liquid phase 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
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume