Naphthalene, 1,2,3,4-tetrahydro-1,5,7-trimethyl-

Other names: 1,5,7-Trimethyl-1,2,3,4-tetrahydronaphthalene
1,2,3,4-Tetrahydro-1,5,7-trimethylnaphthalene
Naphthaline, 1,2,3,4-tetrahydro, 1,5,7-trimethyl

Inchi: InChI=1S/C13H18/c1-9-7-11(3)12-6-4-5-10(2)13(12)8-9/h7-8,10H,4-6H2,1-3H3

InchiKey: VJFBUCVRMBYHAH-UHFFFAOYSA-N

Formula: C13H18

SMILES: Cc1cc(C)c2c(c1)C(C)CCC2

Mol. weight [g/mol]: 174.28

CAS: 21693-55-0

Physical Properties

Property code	Value	Unit	Source
gf	190.75	kJ/mol	Joback Method
hf	-42.89	kJ/mol	Joback Method
hfus	18.34	kJ/mol	Joback Method
hvap	48.88	kJ/mol	Joback Method
log10ws	-4.31		Crippen Method
logp	3.743		Crippen Method
mcvol	159.410	ml/mol	McGowan Method
pc	2438.65	kPa	Joback Method
rinpol	1250.00		NIST Webbook
rinpol	1250.00		NIST Webbook
ripol	1462.00		NIST Webbook
ripol	1462.00		NIST Webbook
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	399.86	J/mol×K	586.59	Joback Method

cpg	417.33	J/mol×K	623.71	Joback Method
cpg	433.76	J/mol×K	660.83	Joback Method
cpg	449.19	J/mol×K	697.95	Joback Method
cpg	463.67	J/mol×K	735.07	Joback Method
cpg	477.25	J/mol×K	772.19	Joback Method
dvisc	0.0014096	Pa×s	314.67	Joback Method
dvisc	0.0009537	Pa×s	353.80	Joback Method
dvisc	0.0006974	Pa×s	392.94	Joback Method
dvisc	0.0005398	Pa×s	432.07	Joback Method
dvisc	0.0004359	Pa×s	471.20	Joback Method
dvisc	0.0003638	Pa×s	510.34	Joback Method
dvisc	0.0003115	Pa×s	549.47	Joback Method

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C21693550&Units=SI

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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point

vc: Critical Volume