

Naphthalene, 1,2,3,4-tetrahydro-1,6,8-trimethyl-

Other names:	1,2,3,4-Tetrahydro-1,6,8-trimethyl naphthalene
Inchi:	InChI=1S/C13H18/c1-9-7-11(3)13-10(2)5-4-6-12(13)8-9/h7-8,10H,4-6H2,1-3H3
InchiKey:	PGZQTASRDRGQAJ-UHFFFAOYSA-N
Formula:	C13H18
SMILES:	<chem>Cc1cc(C)c2c(c1)CCCC2C</chem>
Mol. weight [g/mol]:	174.28
CAS:	30316-36-0

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	1239.00		NIST Webbook
ripol	1610.00		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/molxK	549.47	Joback Method
cpg	399.86	J/molxK	586.59	Joback Method
cpg	417.33	J/molxK	623.71	Joback Method
cpg	433.76	J/molxK	660.83	Joback Method
cpg	449.19	J/molxK	697.95	Joback Method
cpg	463.67	J/molxK	735.07	Joback Method

cpg	477.25	J/molxK	772.19	Joback Method
dvisc	0.0014096	Paxs	314.67	Joback Method
dvisc	0.0009537	Paxs	353.80	Joback Method
dvisc	0.0006974	Paxs	392.94	Joback Method
dvisc	0.0005398	Paxs	432.07	Joback Method
dvisc	0.0004359	Paxs	471.20	Joback Method
dvisc	0.0003638	Paxs	510.34	Joback Method
dvisc	0.0003115	Paxs	549.47	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=C30316360&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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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