Naphthalene, 2-(1,1-dimethylethyl)-1,2,3,4-tetrahydro-

Other names: 2-tert-Butyl-1,2,3,4-Tetrahydronaphthalene
2-tert-Butyltetralin
Naphthalene, 1,2,3,4-tetrahydro-2-(1,1-dimethylethyl)
Inchi: InChI=1S/C14H20/c1-14(2,3)13-9-8-11-6-4-5-7-12(11)10-13/h4-7,13H,8-10H2,1-3H3
InchiKey: FCXYHCYNCWKCOS-UHFFFAOYSA-N
Formula: C14H20
SMILES: CC(C)(C)C1CCc2ccccc2C1
Mol. weight [g/mol]: 188.31
CAS: 42044-22-4

Physical Properties

Property code	Value	Unit	Source
gf	221.27	kJ/mol	Joback Method
hf	-49.34	kJ/mol	Joback Method
hfus	14.29	kJ/mol	Joback Method
hvap	48.48	kJ/mol	Joback Method
log10ws	-4.16		Crippen Method
logp	3.838		Crippen Method
mcvol	173.500	ml/mol	McGowan Method
pc	2329.27	kPa	Joback Method
rinpol	1475.00		NIST Webbook
rinpol	1475.00		NIST Webbook
tb	559.16	K	Joback Method
tc	789.80	K	Joback Method
tf	303.32	K	Joback Method
vc	0.649	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	432.97	J/mol×K	559.16	Joback Method
cpg	454.08	J/mol×K	597.60	Joback Method
cpg	473.68	J/mol×K	636.04	Joback Method
cpg	491.85	J/mol×K	674.48	Joback Method

cpg	508.71	J/mol×K	712.92	Joback Method
cpg	524.35	J/mol×K	751.36	Joback Method
cpg	538.87	J/mol×K	789.80	Joback Method
dvisc	0.0029253	Pa×s	303.32	Joback Method
dvisc	0.0015589	Pa×s	345.96	Joback Method
dvisc	0.0009538	Pa×s	388.60	Joback Method
dvisc	0.0006432	Pa×s	431.24	Joback Method
dvisc	0.0004655	Pa×s	473.88	Joback Method
dvisc	0.0003554	Pa×s	516.52	Joback Method
dvisc	0.0002828	Pa×s	559.16	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=C42044224&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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