Naphthalene, 1,3,6,7-tetramethyl

Other names: 1,3,6,7-Tetramethylnaphthalene
Inchi: InChI=1S/C14H16/c1-9-5-12(4)14-8-11(3)10(2)7-13(14)6-9/h5-8H,1-4H3
InchiKey: WGYHLEAARAGHPX-UHFFFAOYSA-N
Formula: C14H16
SMILES: Cc1cc(C)c2cc(C)c(C)cc2c1
Mol. weight [g/mol]: 184.28
CAS: 7435-50-9

Physical Properties

Property code	Value	Unit	Source
gf	247.54	kJ/mol	Joback Method
hf	49.43	kJ/mol	Joback Method
hfus	21.52	kJ/mol	Joback Method
hvap	53.32	kJ/mol	Joback Method
log10ws	-5.18		Crippen Method
logp	4.073		Crippen Method
mcvol	164.900	ml/mol	McGowan Method
pc	2388.85	kPa	Joback Method
rinpol	283.40		NIST Webbook
rinpol	283.57		NIST Webbook
rinpol	283.59		NIST Webbook
rinpol	285.30		NIST Webbook
rinpol	1680.00		NIST Webbook
tb	585.30	K	Joback Method
tc	810.38	K	Joback Method
tf	356.74	K	Joback Method
vc	0.633	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	389.23	J/mol×K	585.30	Joback Method
cpg	459.28	J/mol×K	772.87	Joback Method
cpg	446.95	J/mol×K	735.36	Joback Method

cpg	433.83	J/mol×K	697.84	Joback Method
cpg	419.87	J/mol×K	660.33	Joback Method
cpg	405.02	J/mol×K	622.81	Joback Method
cpg	470.88	J/mol×K	810.38	Joback Method
dvisc	0.0002702	Pa×s	585.30	Joback Method
dvisc	0.0003101	Pa×s	547.21	Joback Method
dvisc	0.0003634	Pa×s	509.11	Joback Method
dvisc	0.0004369	Pa×s	471.02	Joback Method
dvisc	0.0005425	Pa×s	432.93	Joback Method
dvisc	0.0007025	Pa×s	394.83	Joback Method
dvisc	0.0009613	Pa×s	356.74	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.63870e+01
Coeff. B	-5.38420e+03
Coeff. C	-1.03895e+02
Temperature range (K), min.	438.33
Temperature range (K), max.	590.03

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=R45831&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

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
pvap:	Vapor pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume