Naphthalene, 2-propyl-

Other names: 2-propylnaphthalene
Inchi: InChI=1S/C13H14/c1-2-5-11-8-9-12-6-3-4-7-13(12)10-11/h3-4,6-10H,2,5H2,1H3
InchiKey: LQBNOHAXLHRIQW-UHFFFAOYSA-N
Formula: C13H14
SMILES: CCCc1ccc2ccccc2c1
Mol. weight [g/mol]: 170.25
CAS: 2027-19-2

Physical Properties

Property code	Value	Unit	Source
gf	268.01	kJ/mol	Joback Method
hf	104.48	kJ/mol	Joback Method
hfus	20.10	kJ/mol	Joback Method
hvap	49.11	kJ/mol	Joback Method
log10ws	-4.50		Crippen Method
logp	3.792		Crippen Method
mcvol	150.810	ml/mol	McGowan Method
pc	2755.56	kPa	Joback Method
rinpol	1511.00		NIST Webbook
rinpol	1465.00		NIST Webbook
rinpol	1470.00		NIST Webbook
rinpol	1452.00		NIST Webbook
rinpol	254.50		NIST Webbook
rinpol	1470.00		NIST Webbook
tb	547.48	K	Joback Method
tc	773.60	K	Joback Method
tf	269.50 ± 2.00	K	NIST Webbook
tf	269.60 ± 1.50	K	NIST Webbook
vc	0.578	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	342.33	J/mol×K	547.48	Joback Method

cpg	358.36	J/mol×K	585.17	Joback Method
cpg	373.27	J/mol×K	622.85	Joback Method
cpg	387.16	J/mol×K	660.54	Joback Method
cpg	400.09	J/mol×K	698.22	Joback Method
cpg	412.12	J/mol×K	735.91	Joback Method
cpg	423.35	J/mol×K	773.60	Joback Method
dvisc	0.0016610	Pa×s	307.91	Joback Method
dvisc	0.0010543	Pa×s	347.84	Joback Method
dvisc	0.0007349	Pa×s	387.77	Joback Method
dvisc	0.0005480	Pa×s	427.69	Joback Method
dvisc	0.0004296	Pa×s	467.62	Joback Method
dvisc	0.0003499	Pa×s	507.55	Joback Method
dvisc	0.0002937	Pa×s	547.48	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.47910e+01
Coeff. B	-4.85721e+03
Coeff. C	-7.05230e+01
Temperature range (K), min.	405.42
Temperature range (K), max.	582.91

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/T + C*ln(T) + D*T^2
Coeff. A	1.16059e+02
Coeff. B	-1.23672e+04
Coeff. C	-1.43543e+01
Coeff. D	5.58608e-06
Temperature range (K), min.	433.15
Temperature range (K), max.	772.44

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
KDB:	https://www.cheric.org/files/research/kdb/mol/mol782.mol
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C2027192&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
KDB Vapor Pressure Data:	https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=783

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