Naphthalene, 1-methyl-7-(1-methylethyl)-

Other names:	1-Methyl-7-(1-methylethyl)naphthalene
	1-Methyl-7-isopropyl-naphthalene (eudalene)
	1-Methyl-7-isopropylnaphthalene
	Eudalene
	Eudalin
	Naphthalene, 7-isopropyl-1-methyl-
Inchi:	InChI=1S/C14H16/c1-10(2)13-8-7-12-6-4-5-11(3)14(12)9-13/h4-10H,1-3H3
InchiKey:	UZVVHZJKXPCUQU-UHFFFAOYSA-N
Formula:	C14H16
SMILES:	Cc1cccc2ccc(C(C)C)cc12
Mol. weight [g/mol]:	184.28
CAS:	490-65-3

Physical Properties

Property code	Value	Unit	Source
gf	264.36	kJ/mol	Joback Method
hf	67.09	kJ/mol	Joback Method
hfus	18.78	kJ/mol	Joback Method
hvap	51.61	kJ/mol	Joback Method
log10ws	-4.94		Crippen Method
logp	4.272		Crippen Method
mcvol	164.900	ml/mol	McGowan Method
pc	2480.12	kPa	Joback Method
rinpol	1627.10		NIST Webbook
rinpol	1578.00		NIST Webbook
rinpol	1578.00		NIST Webbook
tb	574.90	K	Joback Method
tc	802.86	K	Joback Method
tf	316.70	K	Joback Method
vc	0.627	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source

cpg	390.19	J/mol×K	574.90	Joback Method
cpg	406.98	J/mol×K	612.89	Joback Method
cpg	422.66	J/mol×K	650.89	Joback Method
cpg	437.29	J/mol×K	688.88	Joback Method
cpg	450.95	J/mol×K	726.87	Joback Method
cpg	463.70	J/mol×K	764.87	Joback Method
cpg	475.62	J/mol×K	802.86	Joback Method
dvisc	0.0016365	Pa×s	316.70	Joback Method
dvisc	0.0010016	Pa×s	359.73	Joback Method
dvisc	0.0006808	Pa×s	402.77	Joback Method
dvisc	0.0004986	Pa×s	445.80	Joback Method
dvisc	0.0003857	Pa×s	488.83	Joback Method
dvisc	0.0003110	Pa×s	531.87	Joback Method
dvisc	0.0002590	Pa×s	574.90	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.37553e+01
Coeff. B	-4.09865e+03
Coeff. C	-1.12817e+02
Temperature range (K), min.	417.15
Temperature range (K), max.	598.22

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=C490653&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

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