Naphthacene, 5,12-dihydro-

Other names:	5,12-Dihydronaphthacene
	5,12-Dihydrotetracene
	dihydronaphthacene
Inchi:	InChI=1S/C18H14/c1-2-6-14-10-18-12-16-8-4-3-7-15(16)11-17(18)9-13(14)5-1/h1-10H,1
InchiKey:	WSXODQAKLVVOCS-UHFFFAOYSA-N
Formula:	C18H14
SMILES:	c1ccc2c(c1)Cc1cc3ccccc3cc1C2
Mol. weight [g/mol]:	230.30
CAS:	959-02-4

Physical Properties

Property code	Value	Unit	Source
chs	-9190.40 ± 1.40	kJ/mol	NIST Webbook
gf	483.82	kJ/mol	Joback Method
hf	224.90	kJ/mol	NIST Webbook
hfs	106.00 ± 2.70	kJ/mol	NIST Webbook
hfus	25.47	kJ/mol	Joback Method
hsub	118.90	kJ/mol	NIST Webbook
hsub	116.00	kJ/mol	NIST Webbook
hvap	63.89	kJ/mol	Joback Method
log10ws	-5.72		Crippen Method
logp	4.335		Crippen Method
mcvol	186.640	ml/mol	McGowan Method
pc	2640.67	kPa	Joback Method
rinpol	381.20		NIST Webbook
rinpol	380.40		NIST Webbook
rinpol	380.40		NIST Webbook
rinpol	381.56		NIST Webbook
rinpol	378.90		NIST Webbook
rinpol	381.56		NIST Webbook
tb	705.66	K	Joback Method
tc	966.71	K	Joback Method
tf	441.42	K	Joback Method
vc	0.716	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	561.76	J/mol×K	923.20	Joback Method
cpg	573.50	J/mol×K	966.71	Joback Method
cpg	492.22	J/mol×K	705.66	Joback Method
cpg	508.26	J/mol×K	749.17	Joback Method
cpg	523.03	J/mol×K	792.68	Joback Method
cpg	536.73	J/mol×K	836.19	Joback Method
cpg	549.58	J/mol×K	879.70	Joback Method
dvisc	0.0006809	Pa×s	705.66	Joback Method
dvisc	0.0007582	Pa×s	661.62	Joback Method
dvisc	0.0017899	Pa×s	441.42	Joback Method
dvisc	0.0014163	Pa×s	485.46	Joback Method
dvisc	0.0011651	Pa×s	529.50	Joback Method
dvisc	0.0009877	Pa×s	573.54	Joback Method
dvisc	0.0008572	Pa×s	617.58	Joback Method
hsubt	120.00	kJ/mol	293.00	NIST Webbook
hsubt	116.00 ± 4.00	kJ/mol	368.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	2.99968e+01
Coeff. B	-1.47290e+04
Coeff. C	-7.60000e-02
Temperature range (K), min.	496.15
Temperature range (K), max.	597.15

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

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C959024&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

Legend

chs:	Standard solid enthalpy of combustion
cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfs:	Solid phase enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hsub:	Enthalpy of sublimation at standard conditions
hsubt:	Enthalpy of sublimation at a given temperature
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