Anthracene, 9,10-dihydro-

Other names: Anthracene, dihydro-
9,10-Dihydroanthracene
para-hydroanthracene
Inchi: InChI=1S/C14H12/c1-2-6-12-10-14-8-4-3-7-13(14)9-11(12)5-1/h1-8H,9-10H2
InchiKey: WPDAVTSOEQEGMS-UHFFFAOYSA-N
Formula: C14H12
SMILES: c1ccc2c(c1)Cc1ccccc1C2
Mol. weight [g/mol]: 180.25
CAS: 613-31-0

Physical Properties

Property code	Value	Unit	Source
chs	-7290.50 ± 1.20	kJ/mol	NIST Webbook
gf	353.12	kJ/mol	Joback Method
hf	217.13	kJ/mol	Joback Method
hfus	18.48	kJ/mol	Joback Method
hsub	94.20 ± 0.80	kJ/mol	NIST Webbook
hvap	52.68	kJ/mol	Joback Method
log10ws	-3.92		Crippen Method
logp	3.182		Crippen Method
mcvol	149.740	ml/mol	McGowan Method
pc	3114.04	kPa	Joback Method
rinpol	1622.00		NIST Webbook
rinpol	1676.60		NIST Webbook
rinpol	1685.30		NIST Webbook
rinpol	1669.60		NIST Webbook
rinpol	1686.10		NIST Webbook
rinpol	1662.10		NIST Webbook
rinpol	1676.60		NIST Webbook
rinpol	1685.30		NIST Webbook
rinpol	1676.60		NIST Webbook
rinpol	1676.20		NIST Webbook
rinpol	1688.00		NIST Webbook
rinpol	1672.00		NIST Webbook
rinpol	1649.00		NIST Webbook
rinpol	1622.00		NIST Webbook
rinpol	1662.00		NIST Webbook

rinpol	1662.00		NIST Webbook
rinpol	1662.10		NIST Webbook
rinpol	285.60		NIST Webbook
rinpol	284.99		NIST Webbook
rinpol	284.78		NIST Webbook
rinpol	284.89		NIST Webbook
rinpol	287.90		NIST Webbook
rinpol	284.15		NIST Webbook
rinpol	284.99		NIST Webbook
rinpol	1676.60		NIST Webbook
rinpol	1669.60		NIST Webbook
rinpol	1662.00		NIST Webbook
rinpol	1652.00		NIST Webbook
rinpol	1676.20		NIST Webbook
rinpol	287.90		NIST Webbook
rinpol	1676.60		NIST Webbook
rinpol	1662.00		NIST Webbook
rinpol	1652.00		NIST Webbook
rinpol	287.50		NIST Webbook
rinpol	1667.00		NIST Webbook
rinpol	287.50		NIST Webbook
ss	218.97	J/mol×K	NIST Webbook
tb	578.20	K	NIST Webbook
tb	585.20	K	NIST Webbook
tc	841.42	K	Joback Method
tf	351.12	K	Joback Method
tt	382.18 ± 0.01	K	NIST Webbook
vc	0.570	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	434.09	J/mol×K	841.42	Joback Method
cpg	385.58	J/mol×K	673.93	Joback Method
cpg	399.22	J/mol×K	715.80	Joback Method
cpg	411.76	J/mol×K	757.67	Joback Method
cpg	423.34	J/mol×K	799.55	Joback Method
cpg	354.45	J/mol×K	590.18	Joback Method
cpg	370.70	J/mol×K	632.05	Joback Method
cps	219.06	J/mol×K	298.15	NIST Webbook
dvisc	0.0004581	Pa×s	590.18	Joback Method

dvisc	0.0006147	Pa×s	510.49	Joback Method
dvisc	0.0007391	Pa×s	470.65	Joback Method
dvisc	0.0009195	Pa×s	430.81	Joback Method
dvisc	0.0011961	Pa×s	390.96	Joback Method
dvisc	0.0005250	Pa×s	550.34	Joback Method
dvisc	0.0016514	Pa×s	351.12	Joback Method
hfust	23.84	kJ/mol	382.18	NIST Webbook
hsubt	89.50	kJ/mol	293.00	NIST Webbook
hsubt	89.50	kJ/mol	388.00	NIST Webbook
hsubt	93.00 ± 4.00	kJ/mol	303.50	NIST Webbook
hsubt	92.00 ± 4.00	kJ/mol	348.50	NIST Webbook
hsubt	93.90	kJ/mol	383.00	NIST Webbook
hsubt	93.30 ± 4.20	kJ/mol	279.00	NIST Webbook
sfust	62.38	J/mol×K	382.18	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	440.70	K	1.70	NIST Webbook

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=C613310&Units=SI

Legend

chs: Standard solid enthalpy of combustion
cpg: Ideal gas heat capacity
cps: Solid phase 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
hfust:	Enthalpy of fusion at a given temperature
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
rinpol:	Non-polar retention indices
sfust:	Entropy of fusion at a given temperature
ss:	Solid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature
vc:	Critical Volume