Phenanthrene, 1,2-dihydro-

Other names: 1,2-Dihydrophenanthrene
Inchi: InChI=1S/C14H12/c1-3-7-13-11(5-1)9-10-12-6-2-4-8-14(12)13/h1,3-5,7-10H,2,6H2
InchiKey: DYHJTAONEPZTCO-UHFFFAOYSA-N
Formula: C14H12
SMILES: C1=Cc2c(ccc3ccccc23)CC1
Mol. weight [g/mol]: 180.25
CAS: 56179-83-0

Physical Properties

Property code	Value	Unit	Source
gf	353.12	kJ/mol	Joback Method
hf	217.13	kJ/mol	Joback Method
hfus	18.48	kJ/mol	Joback Method
hvap	52.68	kJ/mol	Joback Method
log10ws	-4.80		Crippen Method
logp	3.799		Crippen Method
mcvol	149.740	ml/mol	McGowan Method
pc	3114.04	kPa	Joback Method
rinpol	286.78		NIST Webbook
tb	590.18	K	Joback Method
tc	841.42	K	Joback Method
tf	351.12	K	Joback Method
vc	0.570	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	354.45	J/mol×K	590.18	Joback Method
cpg	370.70	J/mol×K	632.05	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	434.09	J/mol×K	841.42	Joback Method

dvisc	0.0016514	Pa×s	351.12	Joback Method
dvisc	0.0011961	Pa×s	390.96	Joback Method
dvisc	0.0009195	Pa×s	430.81	Joback Method
dvisc	0.0007391	Pa×s	470.65	Joback Method
dvisc	0.0006147	Pa×s	510.49	Joback Method
dvisc	0.0005250	Pa×s	550.34	Joback Method
dvisc	0.0004581	Pa×s	590.18	Joback Method

Sources

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=C56179830&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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