Benzo[3,4]phenanthro[2,1,10,9,8,7-pqrstuv]pentap

Inchi: InChI=1S/C32H16/c1-2-9-24-22(8-1)23-10-4-7-19-16-21-12-11-20-15-18-6-3-5-17-13-14-
InchiKey: XNXZKEIQLNZRTF-UHFFFAOYSA-N
Formula: C32H16
SMILES: c1cc2ccc3c4c5ccccc5c5cccc6cc7ccc8cc(c1)c2c3c8c7c4c65
Mol. weight [g/mol]: 400.47
CAS: 120836-12-6

Physical Properties

Property code	Value	Unit	Source
gf	1099.48	kJ/mol	Joback Method
hf	844.61	kJ/mol	Joback Method
hfus	55.04	kJ/mol	Joback Method
hvap	104.95	kJ/mol	Joback Method
log10ws	-14.15		Crippen Method
logp	9.226		Crippen Method
mcvol	295.200	ml/mol	McGowan Method
pc	1792.42	kPa	Joback Method
tb	1121.84	K	Joback Method
tc	1399.15	K	Joback Method
tf	844.90	K	Joback Method
vc	1.185	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	953.39	J/mol×K	1121.84	Joback Method
cpg	984.02	J/mol×K	1168.06	Joback Method
cpg	1018.68	J/mol×K	1214.28	Joback Method
cpg	1057.97	J/mol×K	1260.50	Joback Method
cpg	1102.53	J/mol×K	1306.71	Joback Method
cpg	1152.95	J/mol×K	1352.93	Joback Method
cpg	1209.85	J/mol×K	1399.15	Joback Method
dvisc	0.1009143	Pa×s	844.90	Joback Method
dvisc	0.1032630	Pa×s	891.06	Joback Method

dvisc	0.1054271	Pa×s	937.21	Joback Method
dvisc	0.1074272	Pa×s	983.37	Joback Method
dvisc	0.1092809	Pa×s	1029.53	Joback Method
dvisc	0.1110035	Pa×s	1075.68	Joback Method
dvisc	0.1126083	Pa×s	1121.84	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C120836126&Units=SI
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

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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume