Phenanthrene, 9,10-diphenyl-

Other names: 9,10-Diphenylphenanthrene
Inchi: InChI=1S/C26H18/c1-3-11-19(12-4-1)25-23-17-9-7-15-21(23)22-16-8-10-18-24(22)26(25
InchiKey: SECWSIFCFMVOAN-UHFFFAOYSA-N
Formula: C26H18
SMILES: c1ccc(-c2c(-c3ccccc3)c3ccccc3c3ccccc23)cc1
Mol. weight [g/mol]: 330.42
CAS: 602-15-3

Physical Properties

Property code	Value	Unit	Source
gf	689.68	kJ/mol	Joback Method
hf	477.35	kJ/mol	Joback Method
hfus	38.09	kJ/mol	Joback Method
hvap	85.56	kJ/mol	Joback Method
log10ws	-10.29		Crippen Method
logp	7.327		Crippen Method
mcvol	267.000	ml/mol	McGowan Method
pc	1930.44	kPa	Joback Method
tb	927.22	K	Joback Method
tc	1207.03	K	Joback Method
tf	565.00	K	Joback Method
vc	1.012	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	789.72	J/mol×K	927.22	Joback Method
cpg	864.05	J/mol×K	1160.39	Joback Method
cpg	849.86	J/mol×K	1113.76	Joback Method
cpg	835.60	J/mol×K	1067.12	Joback Method
cpg	821.02	J/mol×K	1020.49	Joback Method
cpg	805.81	J/mol×K	973.85	Joback Method
cpg	878.48	J/mol×K	1207.03	Joback Method
dvisc	0.0002105	Pa×s	927.22	Joback Method

dvisc	0.0002466	Pa×s	866.85	Joback Method
dvisc	0.0002959	Pa×s	806.48	Joback Method
dvisc	0.0003657	Pa×s	746.11	Joback Method
dvisc	0.0004691	Pa×s	685.74	Joback Method
dvisc	0.0006313	Pa×s	625.37	Joback Method
dvisc	0.0009054	Pa×s	565.00	Joback Method

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=C602153&Units=SI
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume