Anthracene, 9,10-diphenyl-

Other names: 9,10-Diphenylanthracene
DPA
Inchi: InChI=1S/C26H18/c1-3-11-19(12-4-1)25-21-15-7-9-17-23(21)26(20-13-5-2-6-14-20)24-18
InchiKey: FCNCGHJSNVOIKE-UHFFFAOYSA-N
Formula: C26H18
SMILES: c1ccc(-c2c3ccccc3c(-c3ccccc3)c3ccccc23)cc1
Mol. weight [g/mol]: 330.42
CAS: 1499-10-1

Physical Properties

Property code	Value	Unit	Source
chs	-13112.40 ± 2.90	kJ/mol	NIST Webbook
gf	689.68	kJ/mol	Joback Method
hf	478.30 ± 7.40	kJ/mol	NIST Webbook
hfs	308.70 ± 4.50	kJ/mol	NIST Webbook
hfus	38.09	kJ/mol	Joback Method
hsub	169.60 ± 5.90	kJ/mol	NIST Webbook
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
rinpol	3000.00		NIST Webbook
rinpol	484.33		NIST Webbook
rinpol	3000.00		NIST Webbook
rinpol	484.33		NIST Webbook
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	821.02	J/mol×K	1020.49	Joback Method
cpg	878.48	J/mol×K	1207.03	Joback Method
cpg	835.60	J/mol×K	1067.12	Joback Method
cpg	849.86	J/mol×K	1113.76	Joback Method
cpg	864.05	J/mol×K	1160.39	Joback Method
cpg	805.81	J/mol×K	973.85	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	0.0002105	Pa×s	927.22	Joback Method
dvisc	0.0009054	Pa×s	565.00	Joback Method
hsubt	156.90 ± 4.20	kJ/mol	491.50	NIST Webbook
hsubt	134.00	kJ/mol	293.00	NIST Webbook
hsubt	157.00 ± 4.20	kJ/mol	481.00	NIST Webbook
hsubt	141.00	kJ/mol	393.00	NIST Webbook
hsubt	143.60	kJ/mol	413.00	NIST Webbook
hsubt	137.50	kJ/mol	383.00	NIST Webbook
hvapt	102.70	kJ/mol	398.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	2.58079e+01
Coeff. B	-1.60597e+04
Coeff. C	8.19030e+01
Temperature range (K), min.	547.39
Temperature range (K), max.	701.63

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C1499101&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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

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
hvapt:	Enthalpy of vaporization at a given temperature
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