Anthracene photodimer

Other names:	Anthracene, dimer
	Dianthracene
	5,12:6,11-Di-o-benzenodibenzo(a,e)cyclooctene, 5,6,11,12-tetrahydro-
	5,12(1',2'):6,11(1'',2'')-Dibenzenodibenzo(a,e)cyclooctene, 5,6,11,12-tetrahydro-
Inchi:	InChI=1S/C28H20/c1-2-10-18-17(9-1)25-19-11-3-4-12-20(19)26(18)28-23-15-7-5-13-21(
InchiKey:	JUTIJVADGQDBGY-UHFFFAOYSA-N
Formula:	C28H20
SMILES:	c1ccc2c(c1)C1c3ccccc3C2C2c3ccccc3C1c1ccccc12
Mol. weight [g/mol]:	356.46
CAS:	1627-06-1

Physical Properties

Property code	Value	Unit	Source
chs	-14169.00	kJ/mol	NIST Webbook
chs	-14183.00	kJ/mol	NIST Webbook
gf	831.04	kJ/mol	Joback Method
hf	507.85	kJ/mol	Joback Method
hfs	306.00	kJ/mol	NIST Webbook
hfus	48.86	kJ/mol	Joback Method
hvap	88.24	kJ/mol	Joback Method
log10ws	-7.76		Crippen Method
logp	6.555		Crippen Method
mcvol	277.760	ml/mol	McGowan Method
pc	1721.73	kPa	Joback Method
tb	960.88	K	Joback Method
tc	1229.65	K	Joback Method
tf	628.26	K	Joback Method
vc	1.081	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	897.83	J/mol×K	960.88	Joback Method
cpg	917.02	J/mol×K	1005.68	Joback Method

cpg	936.42	J/mol×K	1050.47	Joback Method
cpg	956.42	J/mol×K	1095.27	Joback Method
cpg	977.42	J/mol×K	1140.06	Joback Method
cpg	999.82	J/mol×K	1184.86	Joback Method
cpg	1024.03	J/mol×K	1229.65	Joback Method
dvisc	0.0144615	Pa×s	628.26	Joback Method
dvisc	0.0144363	Pa×s	683.70	Joback Method
dvisc	0.0144149	Pa×s	739.13	Joback Method
dvisc	0.0143966	Pa×s	794.57	Joback Method
dvisc	0.0143806	Pa×s	850.01	Joback Method
dvisc	0.0143667	Pa×s	905.44	Joback Method
dvisc	0.0143543	Pa×s	960.88	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=C1627061&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
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