1,5-Dibenzoylnaphthalene

Other names: Methanone, 1,5-naphthalenediylbis[phenyl-
Inchi: InChI=1S/C24H16O2/c25-23(17-9-3-1-4-10-17)21-15-7-14-20-19(21)13-8-16-22(20)24(2
InchiKey: OOSBCICQIJKSIO-UHFFFAOYSA-N
Formula: C24H16O2
SMILES: O=C(c1ccccc1)c1cccc2c(C(=O)c3ccccc3)cccc12
Mol. weight [g/mol]: 336.38
CAS: 83-80-7

Physical Properties

Property code	Value	Unit	Source
gf	317.98	kJ/mol	Joback Method
hf	113.87	kJ/mol	Joback Method
hfus	39.48	kJ/mol	Joback Method
hvap	92.30	kJ/mol	Joback Method
ie	8.14	eV	NIST Webbook
log10ws	-7.19		Crippen Method
logp	5.302		Crippen Method
mcvol	261.420	ml/mol	McGowan Method
pc	2088.84	kPa	Joback Method
tb	965.24	K	Joback Method
tc	1236.07	K	Joback Method
tf	597.10	K	Joback Method
vc	0.990	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	773.08	J/mol×K	965.24	Joback Method
cpg	785.98	J/mol×K	1010.38	Joback Method
cpg	797.92	J/mol×K	1055.52	Joback Method
cpg	809.10	J/mol×K	1100.65	Joback Method
cpg	819.71	J/mol×K	1145.79	Joback Method
cpg	829.95	J/mol×K	1190.93	Joback Method
cpg	840.04	J/mol×K	1236.07	Joback Method

dvisc	0.0007343	Pa×s	597.10	Joback Method
dvisc	0.0004771	Pa×s	658.46	Joback Method
dvisc	0.0003336	Pa×s	719.81	Joback Method
dvisc	0.0002468	Pa×s	781.17	Joback Method
dvisc	0.0001908	Pa×s	842.53	Joback Method
dvisc	0.0001527	Pa×s	903.88	Joback Method
dvisc	0.0001257	Pa×s	965.24	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C83807&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
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

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
ie:	Ionization energy
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

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