Benzamide, N,N'-1,4-phenylenebis-

Other names: N,N'-Dibenzoyl-p-phenylenediamine
1,2-Dibenzamido benzene
1,4-Dibenzamido benzene
Inchi: InChI=1S/C20H16N2O2/c23-19(15-7-3-1-4-8-15)21-17-11-13-18(14-12-17)22-20(24)16-9
InchiKey: ABRHLWPJYNIPHN-UHFFFAOYSA-N
Formula: C20H16N2O2
SMILES: O=C(Nc1ccc(NC(=O)c2ccccc2)cc1)c1ccccc1
Mol. weight [g/mol]: 316.35
CAS: 5467-04-9

Physical Properties

Property code	Value	Unit	Source
gf	366.06	kJ/mol	Joback Method
hf	123.77	kJ/mol	Joback Method
hfus	42.69	kJ/mol	Joback Method
hvap	93.97	kJ/mol	Joback Method
log10ws	-5.42		Crippen Method
logp	4.191		Crippen Method
mcvol	244.480	ml/mol	McGowan Method
pc	2480.12	kPa	Joback Method
tb	950.10	K	Joback Method
tc	1208.77	K	Joback Method
tf	612.12	K	Joback Method
vc	0.913	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	731.23	J/mol×K	950.10	Joback Method
cpg	742.66	J/mol×K	993.21	Joback Method
cpg	752.92	J/mol×K	1036.32	Joback Method
cpg	762.16	J/mol×K	1079.43	Joback Method
cpg	770.51	J/mol×K	1122.55	Joback Method
cpg	778.11	J/mol×K	1165.66	Joback Method

cpg	785.08	J/mol×K	1208.77	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C5467049&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
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