ethanone, 1,2-diphenyl-2-(phenylamino)-

Other names: 1,2-diphenyl-2-(phenylamino)ethanone
Acetophenone, 2-phenyl-2-phenylamino
Inchi: InChI=1S/C20H17NO/c22-20(17-12-6-2-7-13-17)19(16-10-4-1-5-11-16)21-18-14-8-3-9-15
InchiKey: SPWKVDHPFJFAAJ-UHFFFAOYSA-N
Formula: C20H17NO
SMILES: O=C(c1ccccc1)C(Nc1ccccc1)c1ccccc1
Mol. weight [g/mol]: 287.36

Physical Properties

Property code	Value	Unit	Source
gf	412.78	kJ/mol	Joback Method
hf	189.07	kJ/mol	Joback Method
hfus	32.85	kJ/mol	Joback Method
hvap	79.74	kJ/mol	Joback Method
log10ws	-5.44		Crippen Method
logp	4.723		Crippen Method
mcvol	232.930	ml/mol	McGowan Method
pc	2354.20	kPa	Joback Method
rinpol	2440.00		NIST Webbook
tb	840.64	K	Joback Method
tc	1102.25	K	Joback Method
tf	482.01	K	Joback Method
vc	0.867	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	673.54	J/mol×K	840.64	Joback Method
cpg	688.63	J/mol×K	884.24	Joback Method
cpg	702.26	J/mol×K	927.84	Joback Method
cpg	714.59	J/mol×K	971.45	Joback Method
cpg	725.75	J/mol×K	1015.05	Joback Method
cpg	735.92	J/mol×K	1058.65	Joback Method
cpg	745.22	J/mol×K	1102.25	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=U401991&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume