1-Propanone, 1,3,3-triphenyl-

Other names: Propiophenone, 3,3-diphenyl-
3,3-Diphenylpropiophenone
Beta,beta-diphenylpropiophenone
Inchi: InChI=1S/C21H18O/c22-21(19-14-8-3-9-15-19)16-20(17-10-4-1-5-11-17)18-12-6-2-7-13-
InchiKey: WYRBITQXPQGTBL-UHFFFAOYSA-N
Formula: C21H18O
SMILES: O=C(CC(c1ccccc1)c1ccccc1)c1ccccc1
Mol. weight [g/mol]: 286.37
CAS: 606-86-0

Physical Properties

Property code	Value	Unit	Source
gf	331.81	kJ/mol	Joback Method
hf	114.96	kJ/mol	Joback Method
hfus	30.35	kJ/mol	Joback Method
hvap	75.53	kJ/mol	Joback Method
log10ws	-5.84		Crippen Method
logp	5.091		Crippen Method
mcvol	237.040	ml/mol	McGowan Method
pc	2123.64	kPa	Joback Method
tb	813.35	K	Joback Method
tc	1073.57	K	Joback Method
tf	440.62	K	Joback Method
vc	0.887	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	675.79	J/mol×K	813.35	Joback Method
cpg	692.31	J/mol×K	856.72	Joback Method
cpg	707.29	J/mol×K	900.09	Joback Method
cpg	720.87	J/mol×K	943.46	Joback Method
cpg	733.20	J/mol×K	986.83	Joback Method
cpg	744.43	J/mol×K	1030.20	Joback Method

cpg	754.72	J/mol×K	1073.57	Joback Method
dvisc	0.0013118	Pa×s	440.62	Joback Method
dvisc	0.0006201	Pa×s	502.74	Joback Method
dvisc	0.0003456	Pa×s	564.86	Joback Method
dvisc	0.0002163	Pa×s	626.98	Joback Method
dvisc	0.0001473	Pa×s	689.11	Joback Method
dvisc	0.0001069	Pa×s	751.23	Joback Method
dvisc	0.0000815	Pa×s	813.35	Joback Method

Sources

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=C606860&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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
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