Alpha,alpha-diphenyl acetophenone

Inchi: InChI=1S/C20H16O/c21-20(19-9-5-2-6-10-19)15-16-11-13-18(14-12-16)17-7-3-1-4-8-17/
InchiKey: HZXXIQLDHPWKLO-UHFFFAOYSA-N
Formula: C20H16O
SMILES: O=C(Cc1ccc(-c2ccccc2)cc1)c1ccccc1
Mol. weight [g/mol]: 272.34
CAS: 27644-00-4

Physical Properties

Property code	Value	Unit	Source
gf	316.20	kJ/mol	Joback Method
hf	129.41	kJ/mol	Joback Method
hfus	30.89	kJ/mol	Joback Method
hvap	74.35	kJ/mol	Joback Method
log10ws	-6.35		Crippen Method
logp	4.779		Crippen Method
mcvol	222.950	ml/mol	McGowan Method
pc	2274.07	kPa	Joback Method
tb	795.89	K	Joback Method
tc	1057.67	K	Joback Method
tf	456.87	K	Joback Method
vc	0.838	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	618.55	J/mol×K	795.89	Joback Method
cpg	634.55	J/mol×K	839.52	Joback Method
cpg	649.06	J/mol×K	883.15	Joback Method
cpg	662.20	J/mol×K	926.78	Joback Method
cpg	674.11	J/mol×K	970.41	Joback Method
cpg	684.92	J/mol×K	1014.04	Joback Method
cpg	694.77	J/mol×K	1057.67	Joback Method
dvisc	0.0010319	Pa×s	456.87	Joback Method
dvisc	0.0005666	Pa×s	513.37	Joback Method

dvisc	0.0003503	Pa×s	569.88	Joback Method
dvisc	0.0002363	Pa×s	626.38	Joback Method
dvisc	0.0001701	Pa×s	682.88	Joback Method
dvisc	0.0001287	Pa×s	739.39	Joback Method
dvisc	0.0001014	Pa×s	795.89	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=C27644004&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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