Methanone, (4-hydroxyphenyl)phenyl-

Other names:	Benzophenone, 4-hydroxy- p-Benzoylphenol p-Hydroxybenzophenone 4-Benzoylphenol 4-Hydroxybenzophenone 4'-Hydroxybenzophenone
Inchi:	InChI=1S/C13H10O2/c14-12-8-6-11(7-9-12)13(15)10-4-2-1-3-5-10/h1-9,14H
InchiKey:	NPFYZDNDJHZQKY-UHFFFAOYSA-N
Formula:	C13H10O2
SMILES:	O=C(c1ccccc1)c1ccc(O)cc1
Mol. weight [g/mol]:	198.22
CAS:	1137-42-4

Physical Properties

Property code	Value	Unit	Source
gf	-0.14	kJ/mol	Joback Method
hf	-128.48	kJ/mol	Joback Method
hfus	24.89	kJ/mol	Joback Method
hvap	68.84	kJ/mol	Joback Method
ie	8.30	eV	NIST Webbook
ie	8.59 ± 0.05	eV	NIST Webbook
ie	8.80 ± 0.05	eV	NIST Webbook
log10ws	-2.98		Crippen Method
logp	2.623		Crippen Method
mcvol	153.950	ml/mol	McGowan Method
pc	3945.61	kPa	Joback Method
tb	684.69	K	Joback Method
tc	945.04	K	Joback Method
tf	450.76	K	Joback Method
vc	0.519	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source

cpg	389.74	J/mol×K	684.69	Joback Method
cpg	444.52	J/mol×K	901.65	Joback Method
cpg	435.10	J/mol×K	858.25	Joback Method
cpg	425.07	J/mol×K	814.86	Joback Method
cpg	414.27	J/mol×K	771.47	Joback Method
cpg	402.55	J/mol×K	728.08	Joback Method
cpg	453.47	J/mol×K	945.04	Joback Method
dvisc	0.0000206	Pa×s	684.69	Joback Method
dvisc	0.0000303	Pa×s	645.70	Joback Method
dvisc	0.0000467	Pa×s	606.71	Joback Method
dvisc	0.0000765	Pa×s	567.72	Joback Method
dvisc	0.0001348	Pa×s	528.74	Joback Method
dvisc	0.0002598	Pa×s	489.75	Joback Method
dvisc	0.0005613	Pa×s	450.76	Joback Method

Sources

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
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C1137424&Units=SI

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