Benzophenone, 2,4,6-trimethyl-

Other names:	Ketone, mesityl phenyl
	Mesityl phenyl ketone
	Mesitylene, 2-benzoyl-
	Methanone, phenyl(2,4,6-trimethylphenyl)-
	2,4,6-Trimethylbenzophenone
	2,4,6-Trimetilbenzofenon
Inchi:	InChI=1S/C16H16O/c1-11-9-12(2)15(13(3)10-11)16(17)14-7-5-4-6-8-14/h4-10H,1-3H3
InchiKey:	HPAFOABSQZMTHE-UHFFFAOYSA-N
Formula:	C16H16O
SMILES:	Cc1cc(C)c(C(=O)c2ccccc2)c(C)c1
Mol. weight [g/mol]:	224.30
CAS:	954-16-5

Physical Properties

Property code	Value	Unit	Source
gf	150.85	kJ/mol	Joback Method
hf	-47.50	kJ/mol	Joback Method
hfus	25.71	kJ/mol	Joback Method
hvap	64.49	kJ/mol	Joback Method
ie	8.00	eV	NIST Webbook
ie	8.32	eV	NIST Webbook
log10ws	-4.86		Crippen Method
logp	3.843		Crippen Method
mcvol	190.350	ml/mol	McGowan Method
pc	2324.78	kPa	Joback Method
tb	687.65	K	Joback Method
tc	926.61	K	Joback Method
tf	410.41	K	Joback Method
vc	0.722	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	489.90	J/mol×K	687.65	Joback Method

cpg	506.00	J/mol×K	727.48	Joback Method
cpg	520.93	J/mol×K	767.30	Joback Method
cpg	534.74	J/mol×K	807.13	Joback Method
cpg	547.50	J/mol×K	846.96	Joback Method
cpg	559.24	J/mol×K	886.78	Joback Method
cpg	570.04	J/mol×K	926.61	Joback Method
dvisc	0.0010758	Pa×s	410.41	Joback Method
dvisc	0.0006609	Pa×s	456.62	Joback Method
dvisc	0.0004440	Pa×s	502.82	Joback Method
dvisc	0.0003190	Pa×s	549.03	Joback Method
dvisc	0.0002412	Pa×s	595.24	Joback Method
dvisc	0.0001899	Pa×s	641.44	Joback Method
dvisc	0.0001544	Pa×s	687.65	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C954165&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
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