Methanone, (2-chlorophenyl)phenyl-

Other names:	Benzophenone, 2-chloro- o-Chlorobenzophenone 2-Chlorobenzophenone
Inchi:	InChI=1S/C13H9ClO/c14-12-9-5-4-8-11(12)13(15)10-6-2-1-3-7-10/h1-9H
InchiKey:	VMHYWKBKHMYRNF-UHFFFAOYSA-N
Formula:	C13H9ClO
SMILES:	O=C(c1ccccc1)c1ccccc1Cl
Mol. weight [g/mol]:	216.66
CAS:	5162-03-8

Physical Properties

Property code	Value	Unit	Source
gf	132.92	kJ/mol	Joback Method
hf	21.62	kJ/mol	Joback Method
hfus	22.92	kJ/mol	Joback Method
hsub	100.20 ± 0.40	kJ/mol	NIST Webbook
hvap	60.88	kJ/mol	Joback Method
ie	9.60 ± 0.10	eV	NIST Webbook
ie	9.60 ± 0.10	eV	NIST Webbook
log10ws	-4.11		Crippen Method
logp	3.571		Crippen Method
mcvol	160.320	ml/mol	McGowan Method
pc	3110.57	kPa	Joback Method
rinpol	1720.00		NIST Webbook
rinpol	1720.00		NIST Webbook
tb	603.20	K	NIST Webbook
tc	902.74	K	Joback Method
tf	381.48	K	Joback Method
vc	0.603	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	365.91	J/mol×K	646.48	Joback Method

cpg	379.51	J/mol×K	689.19	Joback Method
cpg	391.90	J/mol×K	731.90	Joback Method
cpg	403.17	J/mol×K	774.61	Joback Method
cpg	413.40	J/mol×K	817.32	Joback Method
cpg	422.66	J/mol×K	860.03	Joback Method
cpg	431.03	J/mol×K	902.74	Joback Method
dvisc	0.0016421	Pa×s	381.48	Joback Method
dvisc	0.0009615	Pa×s	425.65	Joback Method
dvisc	0.0006226	Pa×s	469.81	Joback Method
dvisc	0.0004344	Pa×s	513.98	Joback Method
dvisc	0.0003209	Pa×s	558.15	Joback Method
dvisc	0.0002478	Pa×s	602.31	Joback Method
dvisc	0.0001982	Pa×s	646.48	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=C5162038&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
hsub:	Enthalpy of sublimation 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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature

tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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