4-Chlorodibenzoyl

Other names: 1-(4-Chlorophenyl)-2-phenylethan-1,2-dione
Ethanedione, (4-chlorophenyl)(phenyl)-
(p-chlorophenyl)phenylethanedione
Inchi: InChI=1S/C14H9ClO2/c15-12-8-6-11(7-9-12)14(17)13(16)10-4-2-1-3-5-10/h1-9H
InchiKey: QDCKVAZDINMMHO-UHFFFAOYSA-N
Formula: C14H9ClO2
SMILES: O=C(C(=O)c1ccc(Cl)cc1)c1ccccc1
Mol. weight [g/mol]: 244.67
CAS: 22711-23-5

Physical Properties

Property code	Value	Unit	Source
gf	12.42	kJ/mol	Joback Method
hf	-111.60	kJ/mol	Joback Method
hfus	27.10	kJ/mol	Joback Method
hvap	69.85	kJ/mol	Joback Method
log10ws	-4.29		Crippen Method
logp	3.406		Crippen Method
mcvol	175.980	ml/mol	McGowan Method
pc	2999.15	kPa	Joback Method
tb	723.23	K	Joback Method
tc	978.93	K	Joback Method
tf	442.68	K	Joback Method
vc	0.664	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	426.79	J/mol×K	723.23	Joback Method
cpg	439.05	J/mol×K	765.85	Joback Method
cpg	450.15	J/mol×K	808.46	Joback Method
cpg	460.17	J/mol×K	851.08	Joback Method
cpg	469.18	J/mol×K	893.70	Joback Method
cpg	477.27	J/mol×K	936.31	Joback Method

cpg	484.52	J/mol×K	978.93	Joback Method
dvisc	0.0013817	Pa×s	442.68	Joback Method
dvisc	0.0008396	Pa×s	489.44	Joback Method
dvisc	0.0005566	Pa×s	536.20	Joback Method
dvisc	0.0003941	Pa×s	582.96	Joback Method
dvisc	0.0002937	Pa×s	629.71	Joback Method
dvisc	0.0002280	Pa×s	676.47	Joback Method
dvisc	0.0001828	Pa×s	723.23	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C22711235&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

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