Diphenylacetyl chloride

Other names:	2,2-Diphenylacetyl chloride
	Benzeneacetyl chloride, «alpha»-phenyl-
	Acetyl chloride, diphenyl-
	Diphenylacetic acid chloride
	«alpha»,«alpha»-Diphenylacetyl chloride
	Dpac
	«alpha»-phenylbenzeneacetyl chloride
Inchi:	InChI=1S/C14H11ClO/c15-14(16)13(11-7-3-1-4-8-11)12-9-5-2-6-10-12/h1-10,13H
InchiKey:	MSYLETHDEIJMAF-UHFFFAOYSA-N
Formula:	C14H11ClO
SMILES:	O=C(Cl)C(c1ccccc1)c1ccccc1
Mol. weight [g/mol]:	230.69
CAS:	1871-76-7

Physical Properties

Property code	Value	Unit	Source
gf	148.53	kJ/mol	Joback Method
hf	7.17	kJ/mol	Joback Method
hfus	22.37	kJ/mol	Joback Method
hvap	62.05	kJ/mol	Joback Method
log10ws	-3.88		Crippen Method
logp	3.584		Crippen Method
mcvol	174.410	ml/mol	McGowan Method
pc	2871.95	kPa	Joback Method
tb	663.94	K	Joback Method
tc	918.88	K	Joback Method
tf	365.23	K	Joback Method
vc	0.652	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	416.90	J/mol×K	663.94	Joback Method
cpg	431.67	J/mol×K	706.43	Joback Method

cpg	445.10	J/mol×K	748.92	Joback Method
cpg	457.29	J/mol×K	791.41	Joback Method
cpg	468.34	J/mol×K	833.90	Joback Method
cpg	478.35	J/mol×K	876.39	Joback Method
cpg	487.40	J/mol×K	918.88	Joback Method
dvisc	0.0023700	Pa×s	365.23	Joback Method
dvisc	0.0011693	Pa×s	415.02	Joback Method
dvisc	0.0006712	Pa×s	464.80	Joback Method
dvisc	0.0004290	Pa×s	514.59	Joback Method
dvisc	0.0002967	Pa×s	564.37	Joback Method
dvisc	0.0002178	Pa×s	614.15	Joback Method
dvisc	0.0001675	Pa×s	663.94	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	448.70	K	2.30	NIST Webbook
tbrp	451.20	K	2.00	NIST Webbook

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=C1871767&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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume