Benzophenone, 4,4'-didecyloxy-2-hydroxy-

Inchi: InChI=1S/C33H50O4/c1-3-5-7-9-11-13-15-17-25-36-29-21-19-28(20-22-29)33(35)31-24-
InchiKey: JQKWGPZNJCEJDY-UHFFFAOYSA-N
Formula: C33H50O4
SMILES: CCCCCCCCCCOc1ccc(C(=O)c2ccc(OCCCCCCCCCC)cc2O)cc1
Mol. weight [g/mol]: 510.75
CAS: 6285-34-3

Physical Properties

Property code	Value	Unit	Source
gf	-61.00	kJ/mol	Joback Method
hf	-828.66	kJ/mol	Joback Method
hfus	78.29	kJ/mol	Joback Method
hvap	119.51	kJ/mol	Joback Method
log10ws	-10.75		Crippen Method
logp	9.662		Crippen Method
mcvol	447.490	ml/mol	McGowan Method
pc	782.00	kPa	Joback Method
tb	1197.09	K	Joback Method
tc	1487.77	K	Joback Method
tf	745.66	K	Joback Method
vc	1.675	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1632.61	J/mol×K	1197.09	Joback Method
cpg	1654.39	J/mol×K	1245.54	Joback Method
cpg	1675.09	J/mol×K	1293.98	Joback Method
cpg	1694.97	J/mol×K	1342.43	Joback Method
cpg	1714.31	J/mol×K	1390.88	Joback Method
cpg	1733.38	J/mol×K	1439.33	Joback Method
cpg	1752.45	J/mol×K	1487.77	Joback Method
dvisc	0.0000050	Pa×s	745.66	Joback Method
dvisc	0.0000023	Pa×s	820.90	Joback Method

dvisc	0.0000012	Pa×s	896.14	Joback Method
dvisc	0.0000007	Pa×s	971.38	Joback Method
dvisc	0.0000004	Pa×s	1046.61	Joback Method
dvisc	0.0000003	Pa×s	1121.85	Joback Method
dvisc	0.0000002	Pa×s	1197.09	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C6285343&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