4'-Ethyl-4-biphenylcarboxylic acid

Other names: 4-Ethylbiphenyl-4'-carboxylic acid
4-(4-Ethylphenyl)benzoic acid
Inchi: InChI=1S/C15H14O2/c1-2-11-3-5-12(6-4-11)13-7-9-14(10-8-13)15(16)17/h3-10H,2H2,1H
InchiKey: SCEBDBNGUCNRCE-UHFFFAOYSA-N
Formula: C15H14O2
SMILES: CCc1ccc(-c2ccc(C(=O)O)cc2)cc1
Mol. weight [g/mol]: 226.27
CAS: 5731-13-5

Physical Properties

Property code	Value	Unit	Source
gf	15.24	kJ/mol	Joback Method
hf	-167.62	kJ/mol	Joback Method
hfus	27.60	kJ/mol	Joback Method
hvap	78.28	kJ/mol	Joback Method
log10ws	-4.94		Crippen Method
logp	3.614		Crippen Method
mcvol	182.130	ml/mol	McGowan Method
pc	2856.62	kPa	Joback Method
tb	751.97	K	Joback Method
tc	975.63	K	Joback Method
tf	447.44	K	Joback Method
vc	0.684	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	491.42	J/mol×K	751.97	Joback Method
cpg	503.76	J/mol×K	789.25	Joback Method
cpg	515.18	J/mol×K	826.52	Joback Method
cpg	525.73	J/mol×K	863.80	Joback Method
cpg	535.47	J/mol×K	901.08	Joback Method
cpg	544.45	J/mol×K	938.35	Joback Method
cpg	552.71	J/mol×K	975.63	Joback Method

dvisc	0.0009986	Pa×s	447.44	Joback Method
dvisc	0.0004347	Pa×s	498.20	Joback Method
dvisc	0.0002207	Pa×s	548.95	Joback Method
dvisc	0.0001256	Pa×s	599.70	Joback Method
dvisc	0.0000781	Pa×s	650.46	Joback Method
dvisc	0.0000520	Pa×s	701.21	Joback Method
dvisc	0.0000366	Pa×s	751.97	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=C5731135&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
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume