Benzene, 1,1'-[ethylidenebis(oxy-2,1-ethanediyl)]bis-

Other names: Phenylethylacetal
Acetaldehyde diphenylethylacetal
1,1-Bis(phenethyloxy)ethane

Inchi: InChI=1S/C18H22O2/c1-16(19-14-12-17-8-4-2-5-9-17)20-15-13-18-10-6-3-7-11-18/h2-11

InchiKey: JBMMTNRBVCXMHJ-UHFFFAOYSA-N

Formula: C18H22O2

SMILES: CC(OCCc1ccccc1)OCCc1ccccc1

Mol. weight [g/mol]: 270.37

CAS: 122-71-4

Physical Properties

Property code	Value	Unit	Source
gf	113.06	kJ/mol	Joback Method
hf	-211.51	kJ/mol	Joback Method
hfus	29.31	kJ/mol	Joback Method
hvap	64.65	kJ/mol	Joback Method
log10ws	-4.34		Crippen Method
logp	3.851		Crippen Method
mcvol	228.700	ml/mol	McGowan Method
pc	1874.03	kPa	Joback Method
tb	709.00	K	Joback Method
tc	929.36	K	Joback Method
tf	374.92	K	Joback Method
vc	0.858	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	635.46	J/mol×K	709.00	Joback Method
cpg	715.14	J/mol×K	892.63	Joback Method
cpg	701.60	J/mol×K	855.91	Joback Method
cpg	686.91	J/mol×K	819.18	Joback Method
cpg	671.02	J/mol×K	782.45	Joback Method
cpg	653.89	J/mol×K	745.73	Joback Method

cpg	727.55	J/mol×K	929.36	Joback Method
dvisc	0.0000692	Pa×s	709.00	Joback Method
dvisc	0.0000919	Pa×s	653.32	Joback Method
dvisc	0.0001286	Pa×s	597.64	Joback Method
dvisc	0.0001927	Pa×s	541.96	Joback Method
dvisc	0.0003169	Pa×s	486.28	Joback Method
dvisc	0.0005926	Pa×s	430.60	Joback Method
dvisc	0.0013346	Pa×s	374.92	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C122714&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
McGowan Method: http://link.springer.com/article/10.1007/BF02311772

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