d,L-1,2-Dimethyl-1,2-diphenlethylene glycol dimethyl ether

Inchi: InChI=1S/C18H22O2/c1-17(19-3,15-11-7-5-8-12-15)18(2,20-4)16-13-9-6-10-14-16/h5-14

InchiKey: MKOCHBGQRKMDTE-UHFFFAOYSA-N

Formula: C18H22O2

SMILES: COC(C)(c1ccccc1)C(C)(OC)c1ccccc1

Mol. weight [g/mol]: 270.37

CAS: 41047-48-7

Physical Properties

Property code	Value	Unit	Source
chs	-9929.90 ± 5.90	kJ/mol	NIST Webbook
gf	121.18	kJ/mol	Joback Method
hf	-183.00 ± 6.30	kJ/mol	NIST Webbook
hfus	18.01	kJ/mol	Joback Method
hvap	62.44	kJ/mol	Joback Method
log10ws	-4.08		Crippen Method
logp	4.110		Crippen Method
mcvol	228.700	ml/mol	McGowan Method
pc	1923.67	kPa	Joback Method
tb	702.98	K	Joback Method
tc	943.96	K	Joback Method
tf	394.76	K	Joback Method
vc	0.842	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	639.73	J/mol×K	702.98	Joback Method
cpg	659.23	J/mol×K	743.14	Joback Method
cpg	677.14	J/mol×K	783.31	Joback Method
cpg	693.55	J/mol×K	823.47	Joback Method
cpg	708.59	J/mol×K	863.63	Joback Method
cpg	722.36	J/mol×K	903.80	Joback Method
cpg	734.97	J/mol×K	943.96	Joback Method
dvisc	0.0005199	Pa×s	446.13	Joback Method

dvisc	0.0011758	Pa×s	394.76	Joback Method
dvisc	0.0002721	Pa×s	497.50	Joback Method
dvisc	0.0001608	Pa×s	548.87	Joback Method
dvisc	0.0001039	Pa×s	600.24	Joback Method
dvisc	0.0000720	Pa×s	651.61	Joback Method
dvisc	0.0000526	Pa×s	702.98	Joback Method
hsubt	114.00 ± 2.00	kJ/mol	303.00	NIST Webbook
hsubt	114.20 ± 6.30	kJ/mol	338.50	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C41047487&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

chs: Standard solid enthalpy of combustion
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
hsubt: Enthalpy of sublimation at a given temperature
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