Ethoxyacetaldehyde diethylacetal

Other names:	1,1,2-Triethoxyethane
	Ethane, 1,1,2-triethoxy-
Inchi:	InChI=1S/C8H18O3/c1-4-9-7-8(10-5-2)11-6-3/h8H,4-7H2,1-3H3
InchiKey:	VNSJUZIHZNZLKM-UHFFFAOYSA-N
Formula:	C8H18O3
SMILES:	CCOCC(OCC)OCC
Mol. weight [g/mol]:	162.23
CAS:	4819-77-6

Physical Properties

Property code	Value	Unit	Source
gf	-300.96	kJ/mol	Joback Method
hf	-610.39	kJ/mol	Joback Method
hfus	16.52	kJ/mol	Joback Method
hvap	40.24	kJ/mol	Joback Method
log10ws	-1.04		Crippen Method
logp	1.422		Crippen Method
mcvol	141.190	ml/mol	McGowan Method
pc	2429.05	kPa	Joback Method
tb	449.26	K	Joback Method
tc	617.01	K	Joback Method
tf	231.61	K	Joback Method
vc	0.531	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	307.27	J/mol×K	449.26	Joback Method
cpg	367.33	J/mol×K	589.05	Joback Method
cpg	355.98	J/mol×K	561.09	Joback Method
cpg	344.29	J/mol×K	533.14	Joback Method
cpg	332.26	J/mol×K	505.18	Joback Method
cpg	319.92	J/mol×K	477.22	Joback Method
cpg	378.33	J/mol×K	617.01	Joback Method

dvisc	0.0001554	Pa×s	449.26	Joback Method
dvisc	0.0002070	Pa×s	412.99	Joback Method
dvisc	0.0002915	Pa×s	376.71	Joback Method
dvisc	0.0004415	Pa×s	340.44	Joback Method
dvisc	0.0007383	Pa×s	304.16	Joback Method
dvisc	0.0014191	Pa×s	267.88	Joback Method
dvisc	0.0033474	Pa×s	231.61	Joback Method

Sources

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=C4819776&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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