Methoxyacetaldehyde diethyl acetal

Other names: Ethane, 1,1-diethoxy-2-methoxy-
Inchi: InChI=1S/C7H16O3/c1-4-9-7(6-8-3)10-5-2/h7H,4-6H2,1-3H3
InchiKey: PCYADPMXIILFTP-UHFFFAOYSA-N
Formula: C7H16O3
SMILES: CCOC(COC)OCC
Mol. weight [g/mol]: 148.20
CAS: 4819-75-4

Physical Properties

Property code	Value	Unit	Source
gf	-309.38	kJ/mol	Joback Method
hf	-589.75	kJ/mol	Joback Method
hfus	13.93	kJ/mol	Joback Method
hvap	38.02	kJ/mol	Joback Method
log10ws	-0.62		Crippen Method
logp	1.032		Crippen Method
mcvol	127.100	ml/mol	McGowan Method
pc	2676.31	kPa	Joback Method
tb	419.20	K	NIST Webbook
tc	595.08	K	Joback Method
tf	220.34	K	Joback Method
vc	0.475	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	266.07	J/mol×K	426.38	Joback Method
cpg	320.76	J/mol×K	566.96	Joback Method
cpg	310.35	J/mol×K	538.85	Joback Method
cpg	299.67	J/mol×K	510.73	Joback Method
cpg	288.72	J/mol×K	482.61	Joback Method
cpg	277.52	J/mol×K	454.50	Joback Method
cpg	330.86	J/mol×K	595.08	Joback Method
dvisc	0.0001655	Pa×s	426.38	Joback Method

dvisc	0.0002194	Pa×s	392.04	Joback Method
dvisc	0.0003071	Pa×s	357.70	Joback Method
dvisc	0.0004618	Pa×s	323.36	Joback Method
dvisc	0.0007650	Pa×s	289.02	Joback Method
dvisc	0.0014520	Pa×s	254.68	Joback Method
dvisc	0.0033654	Pa×s	220.34	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C4819754&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