Ethanol, 2-methoxy-, carbonate (2:1)

Other names: Bis(2-methoxyethyl) carbonate
Ethanol, 2-methoxy-, carbonate
Inchi: InChI=1S/C7H14O5/c1-9-3-5-11-7(8)12-6-4-10-2/h3-6H2,1-2H3
InchiKey: STLGQBDVSTWGIP-UHFFFAOYSA-N
Formula: C7H14O5
SMILES: COCCOC(=O)OCCOC
Mol. weight [g/mol]: 178.18
CAS: 626-84-6

Physical Properties

Property code	Value	Unit	Source
gf	-540.86	kJ/mol	Joback Method
hf	-829.27	kJ/mol	Joback Method
hfus	20.24	kJ/mol	Joback Method
hvap	47.56	kJ/mol	Joback Method
log10ws	0.15		Crippen Method
logp	0.432		Crippen Method
mcvol	134.540	ml/mol	McGowan Method
pc	2784.72	kPa	Joback Method
tb	503.11	K	Joback Method
tc	603.50 ± 0.70	K	NIST Webbook
tf	307.50	K	Joback Method
vc	0.505	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	307.98	J/mol×K	503.11	Joback Method
cpg	318.82	J/mol×K	532.27	Joback Method
cpg	329.42	J/mol×K	561.42	Joback Method
cpg	339.76	J/mol×K	590.58	Joback Method
cpg	349.80	J/mol×K	619.73	Joback Method
cpg	359.52	J/mol×K	648.89	Joback Method
cpg	368.91	J/mol×K	678.04	Joback Method

dvisc	0.0013531	Pa×s	307.50	Joback Method
dvisc	0.0007955	Pa×s	340.10	Joback Method
dvisc	0.0005132	Pa×s	372.70	Joback Method
dvisc	0.0003553	Pa×s	405.31	Joback Method
dvisc	0.0002598	Pa×s	437.91	Joback Method
dvisc	0.0001984	Pa×s	470.51	Joback Method
dvisc	0.0001569	Pa×s	503.11	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=C626846&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