Ethane, 1-ethoxy-2-methoxy-

Other names: 1-ethoxy-2-methoxyethane
Inchi: InChI=1S/C5H12O2/c1-3-7-5-4-6-2/h3-5H2,1-2H3
InchiKey: CAQYAZNFWDDMIT-UHFFFAOYSA-N
Formula: C5H12O2
SMILES: CCOCCOC
Mol. weight [g/mol]: 104.15
CAS: 5137-45-1

Physical Properties

Property code	Value	Unit	Source
gf	-218.78	kJ/mol	Joback Method
hf	-410.97	kJ/mol	Joback Method
hfus	11.08	kJ/mol	Joback Method
hvap	39.83 ± 0.04	kJ/mol	NIST Webbook
hvap	39.80 ± 0.10	kJ/mol	NIST Webbook
log10ws	-0.09		Crippen Method
logp	0.669		Crippen Method
mcvol	93.050	ml/mol	McGowan Method
pc	3333.53	kPa	Joback Method
rinpol	680.50		NIST Webbook
rinpol	686.00		NIST Webbook
tb	358.00 ± 4.00	K	NIST Webbook
tb	376.65 ± 0.40	K	NIST Webbook
tb	376.00 ± 8.00	K	NIST Webbook
tc	524.09	K	Joback Method
tf	190.57	K	Joback Method
vc	0.351	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	169.54	J/mol×K	358.64	Joback Method
cpg	210.37	J/mol×K	496.51	Joback Method
cpg	202.53	J/mol×K	468.94	Joback Method

cpg	194.52	J/mol×K	441.36	Joback Method
cpg	186.35	J/mol×K	413.79	Joback Method
cpg	178.02	J/mol×K	386.21	Joback Method
cpg	218.03	J/mol×K	524.09	Joback Method
dvisc	0.0002027	Pa×s	358.64	Joback Method
dvisc	0.0002582	Pa×s	330.63	Joback Method
dvisc	0.0003441	Pa×s	302.62	Joback Method
dvisc	0.0004861	Pa×s	274.61	Joback Method
dvisc	0.0007430	Pa×s	246.59	Joback Method
dvisc	0.0012659	Pa×s	218.58	Joback Method
dvisc	0.0025228	Pa×s	190.57	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=C5137451&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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume