1-Propanol, 2-methoxy-

Other names: 2-Methoxy-1-propanol
2-Methoxypropanol
Inchi: InChI=1S/C4H10O2/c1-4(3-5)6-2/h4-5H,3H2,1-2H3
InchiKey: YTTFFPATQICAQN-UHFFFAOYSA-N
Formula: C4H10O2
SMILES: COC(C)CO
Mol. weight [g/mol]: 90.12
CAS: 1589-47-5

Physical Properties

Property code	Value	Unit	Source
gf	-261.46	kJ/mol	Joback Method
hf	-415.62	kJ/mol	Joback Method
hfus	7.87	kJ/mol	Joback Method
hvap	43.20	kJ/mol	Joback Method
log10ws	0.04		Crippen Method
logp	0.014		Crippen Method
mcvol	78.960	ml/mol	McGowan Method
pc	4333.96	kPa	Joback Method
rinpol	664.00		NIST Webbook
rinpol	669.00		NIST Webbook
rinpol	669.00		NIST Webbook
rinpol	661.00		NIST Webbook
tb	402.65	K	Isobaric Vapor Liquid Equilibria for (Water + 1-Methoxy-2-propanol), (Water + 2-Methoxy-1-propanol), and (1-Methoxy-2-propanol + 2-Methoxy-1-propanol) at 101.3 kPa
tc	571.21	K	Joback Method
tf	202.89	K	Joback Method
vc	0.290	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	194.63	J/mol×K	571.21	Joback Method
cpg	154.70	J/mol×K	405.08	Joback Method
cpg	161.85	J/mol×K	432.77	Joback Method
cpg	168.81	J/mol×K	460.46	Joback Method
cpg	175.56	J/mol×K	488.15	Joback Method
cpg	182.12	J/mol×K	515.84	Joback Method
cpg	188.48	J/mol×K	543.52	Joback Method
dvisc	0.0002592	Pa×s	405.08	Joback Method
dvisc	0.1431690	Pa×s	202.89	Joback Method
dvisc	0.0236228	Pa×s	236.59	Joback Method
dvisc	0.0061086	Pa×s	270.29	Joback Method
dvisc	0.0021319	Pa×s	303.99	Joback Method
dvisc	0.0009180	Pa×s	337.68	Joback Method
dvisc	0.0004606	Pa×s	371.38	Joback Method
pvap	101.30	kPa	402.65	Isobaric Vapor Liquid Equilibria for (Water + 1-Methoxy-2-propanol), (Water + 2-Methoxy-1-propanol), and (1-Methoxy-2-propanol + 2-Methoxy-1-propanol) at 101.3 kPa

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	2.10436e+01
Coeff. B	-5.29554e+03
Coeff. C	-5.30870e+01
Temperature range (K), min.	308.22
Temperature range (K), max.	389.69

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Isobaric Vapor Liquid Equilibria for (Water + 1-Methoxy-2-propanol), (Water + 2-Methoxy-1-propanol), and (1-Methoxy-2-propanol + 2-Methoxy-1-propanol) at 101.3 kPa:	https://www.doi.org/10.1021/acs.jced.6b00895
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=C1589475&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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
pvap:	Vapor pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume