Trimethylene glycol monomethyl ether

Other names:	1-Propanol, 3-methoxy-
	3-Methoxy-1-propanol
	Propylene glycol monomethyl ether, «beta»
	Propylene glycol monomethyl ether, Â«betaÂ»
Inchi:	InChI=1S/C4H10O2/c1-6-4-2-3-5/h5H,2-4H2,1H3
InchiKey:	JDFDHBSESGTDAL-UHFFFAOYSA-N
Formula:	C4H10O2
SMILES:	COCCCO
Mol. weight [g/mol]:	90.12
CAS:	1589-49-7

Physical Properties

Property code	Value	Unit	Source
gf	-259.02	kJ/mol	Joback Method
hf	-410.34	kJ/mol	Joback Method
hfus	11.39	kJ/mol	Joback Method
hvap	43.59	kJ/mol	Joback Method
log10ws	0.15		Crippen Method
logp	0.015		Crippen Method
mcvol	78.960	ml/mol	McGowan Method
pc	4288.66	kPa	Joback Method
tb	421.65 ± 2.00	K	NIST Webbook
tc	568.04	K	Joback Method
tf	217.89	K	Joback Method
vc	0.296	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	154.66	J/mol×K	405.52	Joback Method
cpg	161.57	J/mol×K	432.61	Joback Method
cpg	168.30	J/mol×K	459.69	Joback Method
cpg	174.85	J/mol×K	486.78	Joback Method
cpg	181.21	J/mol×K	513.87	Joback Method

cpg	187.39	J/mol×K	540.95	Joback Method
cpg	193.38	J/mol×K	568.04	Joback Method
dvisc	0.0576040	Pa×s	217.89	Joback Method
dvisc	0.0134233	Pa×s	249.16	Joback Method
dvisc	0.0043286	Pa×s	280.43	Joback Method
dvisc	0.0017517	Pa×s	311.70	Joback Method
dvisc	0.0008360	Pa×s	342.98	Joback Method
dvisc	0.0004515	Pa×s	374.25	Joback Method
dvisc	0.0002681	Pa×s	405.52	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	3.06110e+01
Coeff. B	-8.17744e+03
Coeff. C	-6.08840e+01
Temperature range (K), min.	330.56
Temperature range (K), max.	384.11

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C1589497&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume