2-Propanol, 1,1'-[(1-methyl-1,2-ethanediyl)bis(oxy)]bis-

Other names: 1,1'-(propylenedioxy)dipropan-2-ol
2-(2-(2-hydroxypropoxy)propoxy)propan-1-ol
2-Propanol, 1,1'-(propylenedioxy)di-
2-[2-(2-hydroxypropoxy)propoxy]-1-propanol
tripropylene glycol

Inchi: InChI=1S/C9H20O4/c1-7(10)4-12-6-9(3)13-5-8(2)11/h7-11H,4-6H2,1-3H3

InchiKey: LEQCJROTXBYLEU-UHFFFAOYSA-N

Formula: C9H20O4

SMILES: CC(O)COCC(C)OCC(C)O

Mol. weight [g/mol]: 192.25

CAS: 1638-16-0

Physical Properties

Property code	Value	Unit	Source
gf	-466.06	kJ/mol	Joback Method
hf	-813.83	kJ/mol	Joback Method
hfus	19.05	kJ/mol	Joback Method
hvap	72.64	kJ/mol	Joback Method
log10ws	-0.63		Crippen Method
logp	0.170		Crippen Method
mcvol	161.150	ml/mol	McGowan Method
pc	2746.90	kPa	Joback Method
tb	633.20	K	Joback Method
tc	797.93	K	Joback Method
tf	312.29	K	Joback Method
vc	0.596	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	506.27	J/mol×K	797.93	Joback Method
cpg	455.90	J/mol×K	660.66	Joback Method
cpg	466.89	J/mol×K	688.11	Joback Method
cpg	477.42	J/mol×K	715.57	Joback Method

cpg	487.49	J/mol×K	743.02	Joback Method
cpg	497.11	J/mol×K	770.48	Joback Method
cpg	444.44	J/mol×K	633.20	Joback Method
cpl	440.60	J/mol×K	298.00	NIST Webbook
dvisc	0.0000282	Pa×s	579.72	Joback Method
dvisc	0.0000673	Pa×s	526.23	Joback Method
dvisc	0.0001952	Pa×s	472.75	Joback Method
dvisc	0.0007433	Pa×s	419.26	Joback Method
dvisc	0.0041843	Pa×s	365.78	Joback Method
dvisc	0.0000137	Pa×s	633.20	Joback Method
dvisc	0.0425755	Pa×s	312.29	Joback Method
pvap	0.15	kPa	371.15	Vapour-liquid equilibrium for tripropylene glycol + aromatic hydrocarbons binary systems: Experimental data and regression
pvap	0.22	kPa	378.15	Vapour-liquid equilibrium for tripropylene glycol + aromatic hydrocarbons binary systems: Experimental data and regression
pvap	0.04	kPa	350.15	Vapour-liquid equilibrium for tripropylene glycol + aromatic hydrocarbons binary systems: Experimental data and regression
pvap	0.06	kPa	357.15	Vapour-liquid equilibrium for tripropylene glycol + aromatic hydrocarbons binary systems: Experimental data and regression
pvap	0.10	kPa	364.15	Vapour-liquid equilibrium for tripropylene glycol + aromatic hydrocarbons binary systems: Experimental data and regression

rhol	976.90	kg/m3	343.15	Density and vapour pressure of mixed-solvent desiccant systems (propylene glycol or dipropylene glycol or tripropylene glycol + magnesium chloride + water)
rhol	1009.50	kg/m3	303.15	Density and vapour pressure of mixed-solvent desiccant systems (propylene glycol or dipropylene glycol or tripropylene glycol + magnesium chloride + water)
rhol	1001.50	kg/m3	313.15	Density and vapour pressure of mixed-solvent desiccant systems (propylene glycol or dipropylene glycol or tripropylene glycol + magnesium chloride + water)
rhol	1017.50	kg/m3	293.15	Density and vapour pressure of mixed-solvent desiccant systems (propylene glycol or dipropylene glycol or tripropylene glycol + magnesium chloride + water)
rhol	993.40	kg/m3	323.15	Density and vapour pressure of mixed-solvent desiccant systems (propylene glycol or dipropylene glycol or tripropylene glycol + magnesium chloride + water)

rhol	985.20	kg/m3	333.15	Density and vapour pressure of mixed-solvent desiccant systems (propylene glycol or dipropylene glycol or tripropylene glycol + magnesium chloride + water)	
tcondl	0.14	W/m×K	424.90	Density, Viscosity and Thermal Conductivity of Aqueous Solutions of Propylene Glycol, Dipropylene Glycol, and Tripropylene Glycol between 290 K and 460 K	
tcondl	0.14	W/m×K	399.40	Density, Viscosity and Thermal Conductivity of Aqueous Solutions of Propylene Glycol, Dipropylene Glycol, and Tripropylene Glycol between 290 K and 460 K	
tcondl	0.15	W/m×K	376.20	Density, Viscosity and Thermal Conductivity of Aqueous Solutions of Propylene Glycol, Dipropylene Glycol, and Tripropylene Glycol between 290 K and 460 K	
tcondl	0.15	W/m×K	351.10	Density, Viscosity and Thermal Conductivity of Aqueous Solutions of Propylene Glycol, Dipropylene Glycol, and Tripropylene Glycol between 290 K and 460 K	

tcondl	0.15	W/m×K	326.10	Density, Viscosity and Thermal Conductivity of Aqueous Solutions of Propylene Glycol, Dipropylene Glycol, and Tripropylene Glycol between 290 K and 460 K
tcondl	0.15	W/m×K	298.10	Density, Viscosity and Thermal Conductivity of Aqueous Solutions of Propylene Glycol, Dipropylene Glycol, and Tripropylene Glycol between 290 K and 460 K
tcondl	0.14	W/m×K	449.60	Density, Viscosity and Thermal Conductivity of Aqueous Solutions of Propylene Glycol, Dipropylene Glycol, and Tripropylene Glycol between 290 K and 460 K

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Vapour-liquid equilibrium for tripropylene glycol + aromatic hydrocarbons binary systems:	https://www.doi.org/10.1016/j.fluid.2016.05.032
Density and vapour pressure of mixed-solvent desiccant systems:	https://www.doi.org/10.1016/j.jct.2014.08.005
Experimental data and regression: (propylene glycol or dipropylene glycol or tripropylene glycol + magnesium chloride + water):	https://www.doi.org/10.1021/je049960h
Density, Viscosity and Thermal Conductivity of Aqueous Solutions of Propylene Glycol, Dipropylene Glycol, and Tripropylene Glycol between 290 K and 460 K:	https://www.doi.org/10.1021/je049960h
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=C1638160&Units=SI

Legend

cpg:	Ideal gas heat capacity
cpl:	Liquid phase 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
rhol:	Liquid Density
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tcondl:	Liquid thermal conductivity
tf:	Normal melting (fusion) point
vc:	Critical Volume