

2-[2-(2-hydroxypropoxy)prooxy]-1-propanol

Other names:	2-(2-(2-hydroxypropoxy)prooxy)propan-1-ol tripropylene glycol
Inchi:	InChI=1S/C9H20O4/c1-7(11)5-12-9(3)6-13-8(2)4-10/h7-11H,4-6H2,1-3H3
InchiKey:	LCZVSXRMYJUNFX-UHFFFAOYSA-N
Formula:	C9H20O4
SMILES:	CC(O)COC(C)CO(C)CO
Mol. weight [g/mol]:	192.26

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
dvisc	0.0001952	Paxs	472.75	Joback Method

dvisc	0.0007433	Paxs	419.26	Joback Method
dvisc	0.0041843	Paxs	365.78	Joback Method
dvisc	0.0425755	Paxs	312.29	Joback Method
dvisc	0.0000137	Paxs	633.20	Joback Method
dvisc	0.0000282	Paxs	579.72	Joback Method
dvisc	0.0000673	Paxs	526.23	Joback Method
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
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

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	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)
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	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	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	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)
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Sources

Crippen Method: <http://pubs.acs.org/doi/abs/10.1021/ci9903071>

Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

**Vapour-liquid equilibrium for
tripropylene glycol + aromatic
hydrocarbons binary systems:
Density and vapour pressures of
Excess solvent desiccant systems:** <https://www.doi.org/10.1016/j.fluid.2016.05.032>

**Joback's binary systems:
Excess solute data and regresses:** <https://www.doi.org/10.1016/j.jct.2014.08.005>

**(Propylene glycol or dipropylene glycol
or tripropylene glycol + magnesium
chloride + Water):** 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
rhol:	Liquid Density
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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