1-(1-methyl-2-propoxyethoxy)-2-propanol

Other names: 2-propanol, 1-(1-methyl-2-propoxyethoxy)-
dipropylene glycol, monopropyl ether
dipropylene glycol, propyl ether
dowanol dpnP

Inchi: InChI=1S/C9H20O3/c1-4-5-11-7-9(3)12-6-8(2)10/h8-10H,4-7H2,1-3H3

InchiKey: WEZPLQKRXDBPEP-UHFFFAOYSA-N

Formula: C9H20O3

SMILES: CCCOCC(C)OCC(C)O

Mol. weight [g/mol]: 176.26

Physical Properties

Property code	Value	Unit	Source
gf	-326.80	kJ/mol	Joback Method
hf	-656.32	kJ/mol	Joback Method
hfus	18.48	kJ/mol	Joback Method
hvap	56.35	kJ/mol	Joback Method
log10ws	-1.25		Crippen Method
logp	1.199		Crippen Method
mcvol	155.280	ml/mol	McGowan Method
pc	2480.12	kPa	Joback Method
tb	541.46	K	Joback Method
tc	706.33	K	Joback Method
tf	266.47	K	Joback Method
vc	0.583	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	385.99	J/mol×K	541.46	Joback Method
cpg	398.69	J/mol×K	568.94	Joback Method
cpg	410.95	J/mol×K	596.42	Joback Method
cpg	422.77	J/mol×K	623.89	Joback Method
cpg	434.16	J/mol×K	651.37	Joback Method
cpg	445.11	J/mol×K	678.85	Joback Method

cpg	455.62	J/mol×K	706.33	Joback Method
cpl	379.80	J/mol×K	284.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	381.60	J/mol×K	287.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	382.50	J/mol×K	288.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	383.30	J/mol×K	290.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	384.20	J/mol×K	291.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	385.10	J/mol×K	293.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	386.00	J/mol×K	294.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	386.90	J/mol×K	296.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.

cpl	387.80	J/mol×K	297.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	388.10	J/mol×K	298.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	388.60	J/mol×K	299.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	389.50	J/mol×K	300.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	390.40	J/mol×K	302.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	391.30	J/mol×K	303.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	392.20	J/mol×K	305.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	393.00	J/mol×K	306.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	393.90	J/mol×K	308.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	

cpl	394.80	J/mol×K	309.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	395.70	J/mol×K	311.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	396.50	J/mol×K	312.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	397.40	J/mol×K	314.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	398.30	J/mol×K	315.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	399.20	J/mol×K	317.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	400.00	J/mol×K	318.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	400.90	J/mol×K	320.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	

cpl	401.80	J/mol×K	321.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	402.60	J/mol×K	323.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	403.50	J/mol×K	324.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	404.40	J/mol×K	326.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	405.20	J/mol×K	327.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	406.10	J/mol×K	329.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	406.90	J/mol×K	330.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	407.80	J/mol×K	332.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	408.70	J/mol×K	333.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.

cpl	409.50	J/mol×K	335.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	410.40	J/mol×K	336.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	411.20	J/mol×K	338.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	380.70	J/mol×K	285.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	378.90	J/mol×K	282.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	378.00	J/mol×K	281.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	377.10	J/mol×K	279.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	376.20	J/mol×K	278.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	

cpl	375.30	J/mol×K	276.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	411.80	J/mol×K	339.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	374.40	J/mol×K	275.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
dvisc	0.0002412	Pa×s	449.80	Joback Method	
dvisc	0.0014879	Pa×s	358.13	Joback Method	
dvisc	0.0000724	Pa×s	541.46	Joback Method	
dvisc	0.0005404	Pa×s	403.97	Joback Method	
dvisc	0.0001250	Pa×s	495.63	Joback Method	
dvisc	0.0320847	Pa×s	266.47	Joback Method	
dvisc	0.0055153	Pa×s	312.30	Joback Method	
rhol	919.95	kg/m3	293.15	Volumetric and Acoustic Properties for Binary Mixtures of Dipropylene Glycol Monopropyl Ether with Alkylamines at Temperatures Between 288.15 K and 308.15 K	
rhol	915.52	kg/m3	298.15	Volumetric and Acoustic Properties for Binary Mixtures of Dipropylene Glycol Monopropyl Ether with Alkylamines at Temperatures Between 288.15 K and 308.15 K	

rhol	911.08	kg/m3	303.15	Volumetric and Acoustic Properties for Binary Mixtures of Dipropylene Glycol Monopropyl Ether with Alkylamines at Temperatures Between 288.15 K and 308.15 K	
rhol	906.64	kg/m3	308.15	Volumetric and Acoustic Properties for Binary Mixtures of Dipropylene Glycol Monopropyl Ether with Alkylamines at Temperatures Between 288.15 K and 308.15 K	
rhol	924.35	kg/m3	288.15	Volumetric and Acoustic Properties for Binary Mixtures of Dipropylene Glycol Monopropyl Ether with Alkylamines at Temperatures Between 288.15 K and 308.15 K	
speedsl	1234.06	m/s	308.15	Volumetric and Acoustic Properties for Binary Mixtures of Dipropylene Glycol Monopropyl Ether with Alkylamines at Temperatures Between 288.15 K and 308.15 K	
speedsl	1269.88	m/s	298.15	Volumetric and Acoustic Properties for Binary Mixtures of Dipropylene Glycol Monopropyl Ether with Alkylamines at Temperatures Between 288.15 K and 308.15 K	

speedsl	1287.90	m/s	293.15	Volumetric and Acoustic Properties for Binary Mixtures of Dipropylene Glycol Monopropyl Ether with Alkylamines at Temperatures Between 288.15 K and 308.15 K
speedsl	1306.26	m/s	288.15	Volumetric and Acoustic Properties for Binary Mixtures of Dipropylene Glycol Monopropyl Ether with Alkylamines at Temperatures Between 288.15 K and 308.15 K
speedsl	1251.68	m/s	303.15	Volumetric and Acoustic Properties for Binary Mixtures of Dipropylene Glycol Monopropyl Ether with Alkylamines at Temperatures Between 288.15 K and 308.15 K

Sources

Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K: measurements and prediction.: https://www.doi.org/10.1016/j.fluid.2016.09.002

Joback Method: https://en.wikipedia.org/wiki/Joback_method

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

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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

Volumetric and Acoustic Properties for Binary Mixtures of Dipropylene Glycol Monopropyl Ether with Alkylamines at Temperatures Between 288.15 K and 308.15 K: https://www.doi.org/10.1007/s10765-009-0593-3

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
rhol:	Liquid Density
speedsl:	Speed of sound in fluid
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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