

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	455.62	J/molxK	706.33	Joback Method
cpg	445.11	J/molxK	678.85	Joback Method
cpg	434.16	J/molxK	651.37	Joback Method
cpg	422.77	J/molxK	623.89	Joback Method
cpg	398.69	J/molxK	568.94	Joback Method
cpg	385.99	J/molxK	541.46	Joback Method

cpg	410.95	J/mol×K	596.42	Joback Method
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	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	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	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	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	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	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	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	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.
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	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	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	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	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	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	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	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/molxK	321.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	402.60	J/molxK	323.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	404.40	J/molxK	326.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
dvisc	0.0320847	Paxs	266.47	Joback Method
dvisc	0.0001250	Paxs	495.63	Joback Method
dvisc	0.0002412	Paxs	449.80	Joback Method
dvisc	0.0005404	Paxs	403.97	Joback Method
dvisc	0.0014879	Paxs	358.13	Joback Method
dvisc	0.0055153	Paxs	312.30	Joback Method
dvisc	0.0000724	Paxs	541.46	Joback Method
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	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

rhoI	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
rhoI	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
rhoI	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	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	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	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	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	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

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) Measurements and prediction.:	https://www.doi.org/10.1007/s10765-009-0593-3
	https://www.doi.org/10.1016/j.fluid.2016.09.002

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
rho:	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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