1,2,3-propanetriol - Dynamic Viscosity

	[1] T K	[2] p Pa	[3] dynamic vis Pa.s	[4] surface ten N/m
1	293.15	101325	1.41097	0.06400
2	298.15	101325	0.94653	0.06223
3	303.15	101325	0.61135	0.06093
4	308.15	101325	0.41390	0.05957
5	313.15	101325	0.28547	0.05891
6	318.15	101325	0.21368	0.05802
7	323.15	101325	0.14097	0.05768

[1] temperature, K
[2] pressure, Pa
[3] viscosity, dynamic, liquid, Pa.s, isobaric
[4] surface tension, liquid, N/m, isobaric

Bandarkar,F.;Khattab,I.S.;Martinez,F.;Khoubnasabjafari,M.;Vahdati,S.;Jouyban,A., "Viscosity and surface tension of glycerol + N-methyl-2-pyrrolidone mixtures from 293 to 323 K", Phys. Chem. Liq., 53, 1-2, 104-116, 2015

TRP-152973d.2015 [DDB-PCP:2016/283024]

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1,2,3-propanetriol - Dynamic Viscosity

	[1] T K	[2] dynamic vis Pa.s	[3] dielectric -
1	288.15	1.8633	44.3
2	303.15	0.4921	41.2
3	318.15	0.1762	38.7
4	333.15	0.0711	36.0

[1] temperature, K
[2] viscosity, dynamic, liquid, Pa.s
[3] dielectric constant, liquid, -

Sengwa,R.J.;Choudhary,S.;Khatri,V., "Characterization of Dominant Hydrogen Bonded Complex Structures of Dielectric Polarization and Viscous Flow Processes in Glycerol - Formamide Binary Mixtures", J. Solution Chem., 40, 1, 154-163, 2011

TRP-129628d.2011 [DDB-PCP:2012-NOV/229566]

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1,2,3-propanetriol - Dynamic Viscosity

	[1] T K	[2] dynamic vis Pa.s	[3] dielectric -
1	288.15	1.9667	44.38
2	303.15	0.5206	41.17
3	318.15	0.1825	38.99
4	333.15	0.0728	36.48

[1] temperature, K
[2] viscosity, dynamic, liquid, Pa.s
[3] dielectric constant, liquid, -

Sengwa,R.J.;Khatri,V.;Choudhary,S.;Sankhla,S., "Temperature dependent static dielectric constant and viscosity behaviour of glycerol - amide binary mixtures: Characterization of dominant complex structures in dielectric polarization and viscous flow processes", J. Mol. Liq., 154, 2-3, 117-123, 2010

TRP-123449d.2010 [DDB-PCP:2012-NOV/220428]

1,2,3-propanetriol - Dynamic Viscosity

	[1] T K	[2] dynamic vis Pa.s
1	288.65	2.317
2	295.35	1.181
3	296.65	1.176
4	298.05	1.007
5	300.15	0.863

[1] temperature, K
[2] viscosity, dynamic, liquid, Pa.s

Kwon,K.C.;Pallerla,S., "Viscosity of Glycerol and its Aqueous Solutions Measured by a Tank-Tube Viscometer", Chem. Eng. Commun., 183, 71-97, 2000

PRP-18441i.2000 [DDB-PCP:2007-DEC/138591]

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1,2,3-propanetriol - Dynamic Viscosity

	[1] T K	[2] dynamic vis Pa.s
1	288.15	2.33561
2	293.15	1.49912
3	298.15	0.94564
4	303.15	0.62386

[1] temperature, K
[2] viscosity, dynamic, liquid, Pa.s

Kinart,C.M.;Kinart,W.J., "Physicochemical properties of glycerol - formamide liquid mixtures and their assumed internal structures", Phys. Chem. Liq., 33, 3, 159-170, 1996

PRP-12457d.1996 [DDB-PCP:2007-DEC/39232]

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1,2,3-propanetriol - viscosity, dynamic

	[1] T K	[2] dynamic vis -	[3] dynamic vis -	[4] dynamic vis -	[5] dynamic vis -
1	273... 1200	-3.0E-07	2.6192E-08	-2.0E-12	8.3333E-16

[1] temperature, K
[2] viscosity, dynamic, gaseous, -, parameter A, ideal, recommended
[3] viscosity, dynamic, gaseous, -, parameter B, ideal, recommended
[4] viscosity, dynamic, gaseous, -, parameter C, ideal, recommended
[5] viscosity, dynamic, gaseous, -, recommended, parameter D, ideal

Liessmann,G.;Schmidt,W.;Reiffarth,S., "Recommended Thermophysical Data.", Data compilation of the Saechsische Olefinwerke Boehlen Germany, 1, 1995

PRP-1.1995 [2008-FEB-26-16:35/1134]

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1,2,3-propanetriol - Dynamic Viscosity

	[1] T K	[2] p Pa	[3] dynamic vis Pa.s
1	267.15	4.710E+08	1218.9900000
2	272.15	4.960E+08	629.5060000
3	277.15	5.120E+08	291.7428000
4	283.15	5.350E+08	129.7180000
5	288.15	5.550E+08	88.9201000
6	295.35	5.790E+08	46.0256700
7	308.15	6.400E+08	9.4406060
8	313.15	6.620E+08	6.4714280
9	318.15	6.840E+08	4.9545010
10	323.15	7.020E+08	3.4197940
11	328.15	7.220E+08	2.5003450
12	333.15	7.410E+08	1.8836500
13	338.15	7.530E+08	1.3677300
14	343.15	7.620E+08	1.0471300
15	348.15	7.680E+08	0.7638356
16	353.15	7.710E+08	0.6011738
17	358.15	7.720E+08	0.4720631
18	363.15	7.710E+08	0.3572728
19	368.15	7.660E+08	0.2870780
20	373.15	7.560E+08	0.2328092
21	378.15	7.450E+08	0.1972423
22	383.15	7.320E+08	0.1570363
23	388.15	7.190E+08	0.1396368
24	393.15	7.040E+08	0.1158777
25	398.15	6.870E+08	0.0957194
26	284.05	1.115E+09	3026.9130000
27	289.15	1.148E+09	1318.2560000
28	295.65	1.195E+09	437.5220000
29	301.35	1.226E+09	290.4022000
30	306.75	1.252E+09	165.1962000
31	313.15	1.283E+09	90.5732100
32	323.15	1.340E+09	37.6704000
33	333.15	1.400E+09	17.3380300
34	343.15	1.423E+09	8.1470430
35	353.15	1.421E+09	3.9536650
36	363.15	1.409E+09	2.1877610
37	373.15	1.389E+09	1.2387960
38	383.15	1.373E+09	0.7464486
39	393.15	1.357E+09	0.4931740
40	403.15	1.338E+09	0.3380650
41	413.15	1.318E+09	0.2208005
42	423.15	1.298E+09	0.1629296
43	433.15	1.279E+09	0.1188502

[1] temperature, K
[2] pressure, Pa
[3] viscosity, dynamic, liquid, Pa.s

Cook,R.L.;King,H.E.;Herbst,C.A.;Herschbach,D.R., "Pressure and temperature dependent viscosity of two glass-forming liquids: glycerol and dibutyl phthalate", J. Chem. Phys., 100, 7, 5178-5198, 1994

PRP-3547i.1994 [DDB-PCP:2007-DEC/27210]

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1,2,3-propanetriol - Kinematic viscosity

	[1] T K ± 0.1	[2] kinematic v m2/s
1	283.15	0.002950±2.95E-05
2	288.25	0.001810±1.81E-05
3	293.25	0.001160±1.16E-05
4	298.15	0.000714±7.14E-06
5	302.95	0.000475±4.75E-06
6	308.25	0.000312±3.12E-06
7	313.35	0.000216±2.16E-06
8	318.25	0.000156±1.56E-06
9	323.25	0.000114±1.14E-06

[1] temperature, K
[2] viscosity, kinematic, liquid, m2/s

1,2,3-propanetriol: Purity 99.90 %

Shankar,P.N.;Kumar,M., "Experimental Determination of the Kinematic Viscosity of Glycerol - Water Mixtures", Proc. Roy. Soc. London Ser. A, 444, 573-581, 1994

TRP-98611d.1994 [DDB-PCP:2011-DEC/211861]

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1,2,3-propanetriol - Dynamic Viscosity

	[1] T K	[2] p Pa	[3] dynamic vis Pa.s
1	273.15	7.800E+07	17.02158000
2	273.15	1.400E+08	22.28435000
3	273.15	1.730E+08	35.48136000
4	273.15	1.730E+08	35.56314000
5	273.15	2.570E+08	49.54504000
6	273.15	3.270E+08	92.25717000
7	273.15	4.020E+08	142.23280000
8	273.15	4.980E+08	314.05100000
9	273.15	6.100E+08	758.57780000
10	273.15	9.150E+08	6966.26400000
11	273.15	9.670E+08	11668.10000000
12	295.65	2.490E+08	4.87528500
13	295.65	3.680E+08	8.87156000
14	295.65	4.930E+08	18.79318000
15	295.65	7.600E+08	59.15614000
16	295.65	1.129E+09	344.35010000
17	295.65	1.207E+09	587.48940000
18	295.65	1.593E+09	3531.83000000
19	295.65	1.766E+09	7550.91800000
20	295.65	1.981E+09	21232.45000000
21	295.65	2.264E+09	69984.17000000
22	295.65	2.465E+09	210863.00000000
23	295.65	2.539E+09	300607.40000000
24	295.65	2.686E+09	647142.40000000
25	295.65	2.794E+09	1291220.00000000
26	295.65	2.897E+09	1909854.00000000
27	323.15	1.410E+08	0.40271700
28	323.15	2.710E+08	0.70631750
29	323.15	4.950E+08	2.09894000
30	323.15	5.710E+08	2.33345800
31	323.15	7.020E+08	5.14043600
32	323.15	8.950E+08	7.85235600
33	323.15	1.415E+09	39.99450000
34	323.15	1.928E+09	233.88370000
35	323.15	2.194E+09	778.03620000
36	348.15	7.500E+07	0.07798300
37	348.15	1.270E+08	0.09817480
38	348.15	1.750E+08	0.14157940
39	348.15	2.030E+08	0.14421150
40	348.15	3.250E+08	0.21134900
41	348.15	3.530E+08	0.26607250
42	348.15	5.850E+08	0.59429210
43	348.15	5.950E+08	0.48083930
44	348.15	7.110E+08	0.72110750
45	348.15	8.770E+08	1.49279500
46	348.15	9.700E+08	1.53461700
47	348.15	1.129E+09	3.41979400
48	348.15	1.431E+09	7.26106100
49	348.15	1.467E+09	7.21107600
50	348.15	1.498E+09	8.27942100
51	348.15	1.712E+09	16.55770000
52	348.15	1.724E+09	16.10645000
53	348.15	1.916E+09	34.11930000
54	348.15	1.942E+09	31.55005000
55	348.15	2.159E+09	50.46614000
56	348.15	2.266E+09	64.56541000
57	348.15	2.432E+09	104.23180000
58	348.15	2.611E+09	289.73430000
59	348.15	2.642E+09	201.37240000
60	398.15	2.700E+08	0.01651962
61	398.15	5.630E+08	0.04677351
62	398.15	8.910E+08	0.09440610
63	398.15	1.152E+09	0.17823800
64	398.15	1.508E+09	0.44771330
65	398.15	1.610E+09	0.56234130
66	398.15	1.962E+09	1.27644000
67	398.15	2.112E+09	1.65958700
68	398.15	2.477E+09	2.57039600
69	398.15	2.574E+09	3.52370800
70	398.15	2.984E+09	7.04693200

[1] temperature, K
[2] pressure, Pa
[3] viscosity, dynamic, liquid, Pa.s, isothermal

Cook,R.L.;King,H.E.;Herbst,C.A.;Herschbach,D.R., "Pressure and temperature dependent viscosity of two

glass-forming liquids: glycerol and dibutyl phthalate", J. Chem. Phys., 100, 7, 5178-5198, 1994
PRP-3547i.1994 [DDB-PCP:2007-DEC/27187]

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1,2,3-propanetriol - density, viscosity, dynamic

	[1] T K	[2] density/L kg/m3	[3] dynamic vis Pa.s
1	306.15	1252	0.405
2	298.15	1258	0.782
3	291.15	1263	1.140
4	282.15	1268	2.120
5	280.15	1270	3.260
6	277.15	1273	5.834

[1] temperature, K
[2] density, liquid, kg/m3, isobaric
[3] viscosity, dynamic, liquid, Pa.s, isobaric

Bindal,V.N.;Chandra,M.;Som,J.N., "An Ultrasonic Viscometer for the Measurement of Dynamic Shear Viscosity of Liquids.", Indian J. Pure Appl. Phys., 21, 3, 176-179, 1983

VIS-2129e.1983 [2008-FEB-20-14:50/12930]

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1,2,3-propanetriol - viscosity, dynamic

	[1] T K	[2] dynamic vis Pa.s
1	273.15	12.10000
2	278.15	7.05000
3	283.15	3.95000
4	293.15	1.48000
5	303.15	0.60000
6	313.15	0.33000
7	323.15	0.18000
8	333.15	0.10200
9	343.15	0.05900
10	353.15	0.03500
11	363.15	0.02100
12	373.15	0.01300
13	393.15	0.00520
14	413.15	0.00180
15	433.15	0.00100
16	453.15	0.00045
17	473.15	0.00022

[1] temperature, K
[2] viscosity, dynamic, liquid, Pa.s

Vargaftik,N.B., "Dictionary of thermophysical properties of gases and liquids", 37-39, 1972

PRP-1103f.1972 [VARGA7200422_13/3]

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Compounds:

Name	**1,2,3-propanetriol**
Formula	C3H8O3
CAS No.	56-81-5
Synonym(s)	glycerol; glycylalcohol; 1,2,3-trihydroxypropane; glycerine; glyceritol; glycyl alcohol;

Literature:

PRP-1.1995 (BDBB)
Liessmann,G.;Schmidt,W.;Reiffarth,S., "Recommended Thermophysical Data.", Data compilation of the Saechsische Olefinwerke Boehlen Germany, 1, 1995

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PRP-12457d.1996 (DDB)
Kinart,C.M.;Kinart,W.J., "Physicochemical properties of glycerol - formamide liquid mixtures and their assumed internal structures", Phys. Chem. Liq., 33, 3, 159-170, 1996
http://dx.doi.org/10.1080/00319109608039817

PRP-18441i.2000 (DDB)
Kwon,K.C.;Pallerla,S., "Viscosity of Glycerol and its Aqueous Solutions Measured by a Tank-Tube Viscometer", Chem. Eng. Commun., 183, 71-97, 2000 0098-6445
http://dx.doi.org/10.1080/00986440008960503

PRP-3547i.1994 (DDB)
Cook,R.L.;King,H.E.;Herbst,C.A.;Herschbach,D.R., "Pressure and temperature dependent viscosity of two glass-forming liquids: glycerol and dibutyl phthalate", J. Chem. Phys., 100, 7, 5178-5198, 1994
http://dx.doi.org/10.1063/1.467276

TRP-123449d.2010 (DDB)
Sengwa,R.J.;Khatri,V.;Choudhary,S.;Sankhla,S., "Temperature dependent static dielectric constant and viscosity behaviour of glycerol - amide binary mixtures: Characterization of dominant complex structures in dielectric polarization and viscous flow processes", J. Mol. Liq., 154, 2-3, 117-123, 2010
http://dx.doi.org/10.1016/j.molliq.2010.04.014

TRP-129628d.2011 (DDB)
Sengwa,R.J.;Choudhary,S.;Khatri,V., "Characterization of Dominant Hydrogen Bonded Complex Structures of Dielectric Polarization and Viscous Flow Processes in Glycerol - Formamide Binary Mixtures", J. Solution Chem., 40, 1, 154-163, 2011
http://dx.doi.org/10.1007/s10953-010-9633-7

TRP-152973d.2015 (DDB)
Bandarkar,F.;Khattab,I.S.;Martinez,F.;Khoubnasabjafari,M.;Vahdati,S.;Jouyban,A., "Viscosity and surface tension of glycerol + N-methyl-2-pyrrolidone mixtures from 293 to 323 K", Phys. Chem. Liq., 53, 1-2, 104-116, 2015

TRP-98611d.1994 (DDB)
Shankar,P.N.;Kumar,M., "Experimental Determination of the Kinematic Viscosity of Glycerol - Water Mixtures", Proc. Roy. Soc. London Ser. A, 444, 573-581, 1994 0080-4630
http://dx.doi.org/10.1098/rspa.1994.0039

VIS-2129e.1983 (ELDAR)
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