

Physical Properties of Water

Temperature T (degC)	Specific Weight γ kN/m ³	Density (1) ρ kg/m ³	Dynamic Viscosity(2) μ $\times 10^{-3}$ kg/m.s	Kinematic Viscosity ν $\times 10^{-6}$ m ² /s	Vapor Pressure P _v kN/m ²
0	9.805	999.8	1.781	1.785	0.61
5	9.807	1000	1.518	1.519	0.87
10	9.804	999.7	1.307	1.306	1.23
15	9.798	999.1	1.139	1.139	1.7
20	9.789	998.2	1.002	1.003	2.34
25	9.777	997	0.89	0.893	3.17
30	9.764	995.7	0.798	0.8	4.24
40	9.73	992.2	0.653	0.658	7.38
50	9.689	988	0.547	0.553	12.33
60	9.642	983.2	0.466	0.474	19.92
70	9.589	977.8	0.404	0.413	31.16
80	9.53	971.8	0.354	0.364	47.34
90	9.466	965.3	0.315	0.326	70.1
100	9.399	958.4	0.282	0.294	101.33

(1) At atmospheric pressure

(2) Dynamic viscosity can also be expressed in units of N . s/m²

Ref: Based on J.K Venard et al. (1975) Elementary Fluid Mechanics and Crittenden et al. (2012) Water Treatment

<https://github.com/IMEConsultants/physical-properties-of-water>