Physical properties of water at the pressure p = 1 bar

T [°C]	ρ [kg/m^3]	c_p [J/kg K]	β [10^{-3}/K]	λ [W/m K]	μ [10^{-6} Pa s]	ν [10^{-6} m^2/s]	a [10^{-6} m^2/s]	Pr [-]
- 20	992.8	4375	- 0.7056	0.5118	4311.0	4.342	0.118	36.85
- 15	995.8	4312	- 0.4946	0.5259	3312.8	3.372	0.122	27.17
- 10	997.8	4269	- 0.3281	0.5388	2533.4	2.639	0.125	20.86
- 5	999.1	4238	- 0.1943	0.5508	2149.4	2.151	0.130	16.54
0	999.8	4217	- 0.0852	0.5620	1791.8	1.792	0.133	13.44
5	1000.0	4202	0.0055	0.5724	1519.6	1.520	0.136	11.16
10	999.8	4192	0.0823	0.5820	1307.6	1.308	0.139	9.42
15	999.2	4186	0.1486	0.5911	1139.0	1.140	0.141	8.07
20	998.3	4182	0.2067	0.5996	1002.6	1.004	0.144	6.99
25	997.2	4180	0.2586	0.6076	890.8	0.893	0.146	6.13
30	995.8	4178	0.3056	0.6151	797.7	0.801	0.148	5.42
35	994.1	4178	0.3488	0.6221	719.5	0.724	0.150	4.83
40	992.3	4179	0.3890	0.6287	653.1	0.658	0.152	4.34
45	990.3	4180	0.4267	0.6348	596.3	0.602	0.153	3.93
50	988.1	4181	0.4523	0.6405	547.1	0.554	0.155	3.57
55	985.7	4183	0.4963	0.6458	504.3	0.512	0.157	3.27
60	983.2	4185	0.5288	0.6507	465.8	0.475	0.158	3.00
65	980.5	4187	0.5590	0.6553	433.8	0.442	0.160	2.77
70	977.7	4190	0.5900	0.6595	404.5	0.414	0.161	2.57
75	974.7	4193	0.5190	0.6633	378.3	0.388	0.162	2.39
80	971.4	4196	0.6473	0.6668	355.0	0.365	0.164	2.23
85	968.5	4200	0.6748	0.6699	333.9	0.345	0.165	2.09
90	965.1	4205	0.7018	0.6728	315.0	0.326	0.166	1.97
95	961.7	4210	0.7284	0.6753	297.8	0.310	0.167	1.86
99.63[+)]	958.4	4215	0.7527	0.6773	283.3	0.296	0.168	1.76

[+)] State of saturation

Physical properties of water at the pressure p = 5 bar								
T [°C]	ρ [kg/m^3]	c_p [J/kg K]	β [10^{-3}/K]	λ [W/m K]	μ [10^{-6} Pa s]	ν [10^{-6} m^2/s]	a [10^{-6} m^2/s]	Pr [-]
0	1000.0	4215	- 0.08376	0.5622	1791	1.79	0.133	13.4
25	997.3	4178	0.2590	0.6078	890.7	0.893	0.146	6.12
50	988.2	4180	0.4622	0. 6407	547.2	0.554	0.155	3.57
75	974.9	4192	0.6185	0.6635	378.4	0.388	0.162	2.39
100	958.3	4215	0.7539	0.6777	282.3	0.295	0.168	1.76
150	916.8	4310	1.024	0.6836	181.9	0.198	0.173	1.15

Physical properties of water at the pressure p = 10 bar								
T [°C]	ρ [kg/m^3]	c_p [J/kg K]	β [10^{-3}/K]	λ [W/m K]	μ [10^{-6} Pa s]	ν [10^{-6} m^2/s]	a [10^{-6} m^2/s]	Pr [-]
0	1000.3	4212	- 0.08199	0.5625	1790	1.79	0.134	13.4
25	997.6	4177	0.2595	0.6081	890.6	0.893	0.146	6.12
50	988.5	4179	0.4620	0.6410	547.2	0.554	0.155	3.57
75	975.1	4191	0.6179	0.6638	378.6	0.388	0.162	2.39
100	958.6	4214	0.7530	0.6780	282.4	0.295	0.168	1.76
150	917.1	4308	1.022	0.6839	182.0	0.198	0.173	1.15

Physical properties of water in the state of saturation (liquid)

T [°C]	p [bar]	ρ [kg/m^3]	c_p [J/kg K]	β [10^{-3}/K]	λ [W/m K]	μ [10^{-6} Pa s]	ν [10^{-6} m^2/s]	a [10^{-6} m^2/s]	Pr [-]
0.01	0.00611	999.8	4217	- 0.0853	0.562	1791.4	1.792	0.1333	13.44
10	0.01227	999.7	4193	0.0821	0.582	1307.7	1.308	0.1388	9.42
20	0.02337	998.3	4182	0.2066	0.600	1002.7	1.004	0.1436	6.99
30	0.04242	995.7	4179	0.3056	0.615	797.7	0.801	0.1478	5.42
40	0.07375	992.2	4179	0.3890	0.629	653.1	0.658	0.1516	4.34
50	0.12335	988.0	4181	0.4624	0.640	547.1	0.554	0.1550	3.57
60	0.19919	983.1	4185	0.5288	0.651	466.8	0.475	0.1582	3.00
70	0.31151	977.7	4190	0.5900	0.659	404.4	0.414	0.1610	2.57
80	0.47359	971.6	4197	0.6473	0.667	355.0	0.365	0.1635	2.234
90	0.70108	965.1	4205	0.7019	0.673	315.0	0.326	0.1658	1.969
100	1.01325	958.1	4216	0.7547	0.677	282.2	0.294	0.1677	1.756
110	1.4326	950.7	4229	0.8068	0.681	254.9	0.268	0.1694	1.583
120	1.9854	942.8	4245	0.8590	0.683	232.1	0.246	0.1707	1.442
130	2.7012	934.6	4263	0.9121	0.684	212.7	0.228	0.1718	1.325

Physical properties of dry air at the pressure p = 1 bar								
T [°C]	ρ [kg/m^3]	c_p [J/kg K]	β [10^{-3}/K]	λ [W/m K]	μ [10^{-6} Pa s]	ν [10^{-6} m^2/s]	a [10^{-6} m^2/s]	Pr [-]
- 40	1.4952	1006	4.304	0.02145	15.09	10.09	14.3	0.71
- 20	1.3765	1006	3.962	0.02301	16.15	11.73	16.6	0.71
0	1.2754	1006	3.671	0.02454	17.10	13.41	19.1	0.70
20	1.1881	1007	3.419	0.02603	17.98	15.13	21.8	0.70
40	1.1120	1008	3.200	0.02749	18.81	16.92	24.5	0.69
60	1.0452	1009	3.007	0.02894	19.73	18.88	27.4	0.69
80	0.9859	1010	2.836	0.03038	20.73	21.02	30.5	0.69
100	0.9329	1012	2.684	0.03181	21.60	23.15	33.7	0.69
120	0.8854	1014	2.547	0.03323	22.43	25.33	37.0	0.68
140	0.8425	1017	2.423	0.03466	23.19	27.53	40.5	0.68
160	0.8036	1020	2.311	0.03607	24.01	29.88	44.0	0.68
180	0.7681	1023	2.209	0.03749	24.91	32.43	47.7	0.68
200	0.7356	1026	2.115	0.03891	25.70	34.94	51.6	0.68
250	0.6653	1035	1.912	0.04243	27.40	41.18	61.6	0.67

T	Temperature in °C	β	Thermal expansion coefficient	a	Thermal diffusivity
p	Pressure	λ	Thermal conductivity	Pr	Prandtl number
ρ	Density	μ	Dynamic viscosity		
c_p	Specific heat capacity at p = constant	ν	Kinematic viscosity		