

Water density = W

Fresh water density $\rho_w = 997 \text{ kg/m}^3$ at STP.

Table 1 shows the corrections to the fresh water density depending on ambient temperature and the concentration of Sodium Chloride (NaCl).

Table 1 – Saline water density in kg/m^3 at atmospheric pressure and different temperature										
Per Cent by Weight in Solution	Density of Sodium Chloride Solutions									
	0°C	10°C	20°C	25°C	30°C	40°C	50°C	60°C	80°C	100°C
1	1.00747	1.00707	1.00534	1.00409	1.00261	0.99908	0.99482	0.99000	0.97850	0.96510
2	1.01509	1.01442	1.01246	1.01112	1.00957	1.00593	1.00161	0.99670	0.98520	0.97190
4	1.03038	1.02920	1.02680	1.02530	1.02361	1.01977	1.01531	1.01030	0.99880	0.98550
6	1.04575	1.04408	1.04127	1.03963	1.03781	1.03378	1.02919	1.02410	1.01250	0.99940
8	1.06121	1.05907	1.05589	1.05412	1.05219	1.04798	1.04326	1.03810	1.02640	1.01340
10	1.07677	1.07419	1.07068	1.06879	1.06676	1.06238	1.05753	1.05230	1.04050	1.02760
12	1.09244	1.08946	1.08566	1.08365	1.08153	1.07699	1.07202	1.06670	1.05490	1.04200
14	1.10824	1.10491	1.10085	1.09872	1.09651	1.09182	1.08674	1.08130	1.06940	1.05650
16	1.12419	1.12056	1.11621	1.11401	1.11171	1.10688	1.10170	1.09620	1.08420	1.07130
18	1.14031	1.13643	1.13190	1.12954	1.12715	1.12218	1.11691	1.11130	1.09930	1.08640
20	1.15663	1.15254	1.14779	1.14533	1.14285	1.13774	1.13238	1.12680	1.11460	1.10170
22	1.17318	1.16891	1.16395	1.16140	1.15883	1.15358	1.14812	1.14250	1.13030	1.11720
24	1.18999	1.18557	1.18040	1.17776	1.17511	1.16971	1.16414	1.15840	1.14630	1.13310
26	1.20709	1.20254	1.19717	1.19443	1.19170	1.18614	1.18045	1.17470	1.16260	1.14920

See Also

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[[Water density correlations \(\$\rho_w\$ \)](#)]