

TABLE 5.14 Density of Mercury and Water

The density of mercury and pure air-free water under a pressure of 101 325 Pa (1 atm) is given in units of grams per cubic centimeter ($\text{g} \cdot \text{cm}^{-3}$). For mercury, the values are based on the density at 20°C being $13.545\ 884\ \text{g} \cdot \text{cm}^{-3}$. Water attains its maximum density of $0.999\ 973\ \text{g} \cdot \text{cm}^{-3}$ at 3.98°C. For water, the temperature (t_m , °C) of maximum density at different pressures (p) in atmospheres is given by

$$t_m = 3.98 - 0.0225(p - 1)$$

Density of Water	Temp., °C	Density of Mercury	Density of Water	Temp., °C	Density of Mercury
	-20	13.644 59	0.987 12	52	13.467 68
	-18	13.639 62	0.986 18	54	13.462 82
	-16	13.634 66	0.985 21	56	13.457 96
	-14	13.629 70	0.984 22	58	13.453 09
	-12	13.624 75	0.983 20	60	13.448 23
	-10	13.619 79	0.982 16	62	13.443 37
	-8	13.614 85	0.981 09	64	13.438 52
	-6	13.609 90	0.980 01	66	13.433 67
	-4	13.604 96	0.978 90	68	13.428 82
	-2	13.600 02	0.977 77	70	13.423 97
0.999 84	0	13.595 08	0.976 61	72	13.419 13
0.999 94	2	13.590 15	0.975 44	74	13.414 28
0.999 97	4	13.585 22	0.974 24	76	13.409 43
0.999 94	6	13.580 29	0.973 03	78	13.404 60
0.999 85	8	13.575 36	0.971 79	80	13.399 77
0.999 70	10	13.570 44	0.970 53	82	13.394 92
0.999 50	12	13.565 52	0.969 26	84	13.390 09
0.999 24	14	13.560 60	0.967 96	86	13.385 26
0.998 94	16	13.555 70	0.966 65	88	13.380 42
0.998 60	18	13.550 79	0.965 31	90	13.375 60
0.998 20	20	13.545 88	0.963 96	92	13.370 77
0.997 77	22	13.540 97	0.962 59	94	13.365 94
0.997 30	24	13.536 06	0.961 20	96	13.361 12
0.996 78	26	13.531 17	0.959 79	98	13.356 30
0.996 23	28	13.526 26	0.958 36	100	13.351 48
0.995 65	30	13.521 37		120	13.303 4
0.995 03	32	13.516 47		140	13.255 4
0.994 37	34	13.511 58		160	13.207 6
0.993 69	36	13.506 70		180	13.159 8
0.992 97	38	13.501 82		200	13.112 0
0.992 22	40	13.496 93		220	13.064 5
0.991 44	42	13.492 07		240	13.016 9
0.990 63	44	13.487 18		260	12.969 2
0.989 79	46	13.482 29		280	12.921 5
0.988 93	48	13.477 42		300	12.873 7
0.988 04	50	13.472 56			