

# 饱和蒸汽密度表

表中压力为绝对压力，密度单位为 kg/m<sup>3</sup>

温度 (t) °C	压力 (P) MPa	密度(ρ)	温度 (t) °C	压力 (P) MPa	密度(ρ)
100	0.1013	0.5977	128	0.2543	1.415
101	0.1050	0.6180	129	0.2621	1.455
102	0.1088	0.6388	130	0.2701	1.497
103	0.1127	0.6601	131	0.2783	1.539
104	0.1167	0.6821	132	0.2867	1.583
105	0.1208	0.7046	133	0.2953	1.627
106	0.1250	0.7277	134	0.3041	1.672
107	0.1294	0.7515	135	0.3130	1.719
108	0.1339	0.7758	136	0.3222	1.766
109	0.1385	0.8008	137	0.3317	1.815
110	0.1433	0.8265	138	0.3414	1.864
111	0.1481	0.8528	139	0.3513	1.915
112	0.1532	0.8798	140	0.3614	1.967
113	0.1583	0.9075	141	0.3718	2.019
114	0.1636	0.9359	142	0.3823	2.073
115	0.1691	0.9650	143	0.3931	2.129
116	0.1746	0.9948	144	0.4042	2.185
117	0.1804	1.025	145	0.4155	2.242
118	0.1863	1.057	146	0.4271	2.301
119	0.1923	1.089	147	0.4389	2.361
120	0.1985	1.122	148	0.4510	2.422
121	0.2049	1.155	149	0.4633	2.484
122	0.2114	1.190	150	0.4760	2.548
123	0.2182	1.225	151	0.4888	2.613
124	0.2250	1.261	152	0.5021	2.679
125	0.2321	1.298	153	0.5155	2.747
126	0.2393	1.336	154	0.5292	2.816
127	0.2467	1.375	155	0.5433	2.886
156	0.5577	2.958	184	1.0983	5.629
157	0.5723	3.032	185	1.1233	5.752
158	0.5872	3.106	186	1.1487	5.877
159	0.6025	3.182	187	1.1746	6.003
160	0.6181	3.260	188	1.2010	6.131
161	0.6339	3.339	189	1.2278	6.264
162	0.6502	3.420	190	1.2551	6.397
163	0.6666	3.502	191	1.2829	6.553
164	0.6835	3.586	192	1.3111	6.671
165	0.7008	3.671	193	1.3397	6.812

166	0. 7183	3. 758	194	1. 3690	6. 955
167	0. 7362	3. 847	195	1. 3987	7. 100
168	0. 7544	3. 937	196	1. 4289	7. 248
169	0. 7730	4. 029	197	1. 4596	7. 398
170	0. 7920	4. 123	198	1. 4909	7. 551
171	0. 8114	4. 218	199	1. 5225	7. 706
172	0. 8310	4. 316	200	1. 5548	7. 864
173	0. 8511	4. 415	201	1. 5876	8. 025
174	0. 8716	4. 515	202	1. 6210	8. 188
175	0. 8924	4. 618	203	1. 6548	8. 354
176	0. 9137	4. 723	204	1. 6892	8. 522
177	0. 9353	4. 829	205	1. 7242	8. 694
178	0. 9573	4. 937	206	1. 7597	8. 868
179	0. 9797	5. 048	207	1. 7959	9. 045
180	1. 0197	5. 160	208	1. 8326	9. 225
181	1. 0259	5. 274	209	1. 8699	9. 408
182	1. 0496	5. 391	210	1. 9077	9. 593
183	1. 0737	5. 509	211	1. 9462	9. 782
212	1. 9852	9. 974	231	2. 8491	14. 25
213	2. 0248	10. 17	232	2. 9010	14. 52
214	2. 0650	10. 37	233	2. 9546	14. 78
215	2. 1059	10. 57	234	3. 0085	15. 05
216	2. 1474	10. 77	235	3. 0631	15. 33
217	2. 1896	10. 98	236	3. 1185	15. 61
218	2. 2323	11. 19	237	3. 1746	15. 89
219	2. 2757	11. 41	238	3. 2316	16. 18
220	2. 3198	11. 62	239	3. 2892	16. 47
221	2. 3645	11. 84	240	3. 3477	16. 76
222	2. 4098	12. 07	241	3. 4070	17. 06
223	2. 4559	12. 30	242	3. 4670	17. 37
224	2. 5026	12. 53	243	3. 5279	17. 68
225	2. 5500	12. 76	244	3. 5897	17. 99
226	2. 5981	13. 00	245	3. 6522	18. 31
227	2. 6469	13. 24	246	3. 7155	18. 64
228	2. 6963	13. 49	247	3. 7797	18. 97
229	2. 7466	13. 74	248	3. 8448	19. 30
230	2. 7975	14. 00	249	3. 9107	19. 64

# 过热蒸汽密度表

过热蒸汽是对应于当时压力下的饱和温度而言的, 同样压力下的蒸汽, 在饱和点的温度就是饱和温度。高于饱和的温度的蒸汽就是当时压力的过热蒸汽。可以高 1℃, 也可以 10℃ 100℃ 等。它们的压力是一样的, 但它们过热度不同也就是温度不同时的焓值、熵值、密度等性质不一样。

表中压力为绝对压力, 密度单位为 kg/m<sup>3</sup>

压力

(Mpa)

温 度 (°C)

	150	170	190	210	230
0.10	0.5164	0.4925	0.4707	0.4507	0.4323
0.15	0.7781	0.7412	0.7079	0.6777	0.6500
0.20	1.0423	0.9918	0.9466	0.9056	0.8684
0.25	1.3089	1.2444	1.1869	1.1349	1.0849
0.30	1.5783	1.4990	1.4287	1.3653	1.3079
0.40	2.1237	2.0141	1.9166	1.8297	1.7513
0.50	2.6658	2.5380	2.4121	2.2997	2.1992
0.80	4.3966	4.1676	3.9350	3.7400	3.5374
1.10	6.1313	5.8332	5.5342	5.2356	4.9810
1.40	7.8785	7.5163	7.1540	6.7913	6.4288
1.70	9.8464	9.3688	8.9473	8.4130	7.9352
2.00	11.6295	11.0985	10.5676	10.0366	9.5054
2.50	15.1890	14.4516	13.7150	12.9776	12.2406
3.00	18.4168	17.5709	16.7243	15.8776	15.0367
3.50	22.7008	21.5713	20.4427	19.3131	18.2266
4.00	27.1640	25.7470	24.3303	22.9129	21.4954
4.50	30.3852	28.9163	27.4475	25.9784	24.5096
5.00	35.4243	33.6293	31.8342	30.0384	28.2433
6.00	43.8954	41.7475	39.5988	37.4508	35.3020
7.00	56.7201	53.6991	50.6780	47.6561	44.6352
8.00	65.4713	62.1800	58.8883	55.5968	52.3061
9.00	84.5457	79.8261	75.1061	70.3863	65.6665
10.0	108.6250	102.0289	95.4346	88.8412	82.2486
12.5	158.3464	148.7516	139.1578	129.5629	119.9781
15.0	206.4175	194.4276	182.4477	170.4577	158.4766
17.5	250.3934	236.6910	222.8603	209.1592	195.4568
20.0	327.8165	309.9521	291.2953	273.4409	255.5786
21.5	384.6647	363.2975	341.9027	320.5455	299.1880

压力

(Mpa)

温 度 (°C)

250	270	290	310	330
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0.10	0.4156	0.4001	0.3857	0.3724	0.3600
0.15	0.6246	0.6010	0.5795	0.5594	0.5404
0.20	0.8342	0.8027	0.7736	0.7465	0.7214
0.25	1.0445	1.0048	0.9682	0.9343	0.9027
0.30	1.2540	1.2077	1.1634	1.1224	1.0844
0.40	1.6780	1.6152	1.5554	1.5000	1.4490
0.50	2.1081	2.0255	1.9495	1.8802	1.8147
0.80	3.4110	3.2718	3.1453	3.0283	2.9215
1.10	4.7460	4.5445	4.3612	4.1943	4.0410
1.40	6.1147	5.8437	5.5945	5.3794	5.1777
1.70	7.5219	7.1830	6.8607	6.5815	6.3309
2.00	8.9744	8.5350	8.1447	7.8061	7.4955
2.50	11.5036	10.8794	10.3500	9.8888	9.4806
3.00	14.1842	13.3377	12.6359	11.9979	11.5143
3.50	17.0530	15.9243	15.0163	14.2565	13.8501
4.00	20.0778	18.6603	17.4997	16.5527	15.7490
4.50	23.0407	21.5717	20.1028	18.9333	17.9308
5.00	26.4483	24.6532	22.8580	21.4221	20.2508
6.00	33.1541	31.0062	28.8574	26.7091	25.0502
7.00	41.6133	38.5922	35.5704	32.5488	30.2231
8.00	49.0145	45.7231	42.4316	39.1399	35.8485
9.00	60.9465	56.2100	51.5077	46.7877	42.0680
10.0	75.6543	65.7699	62.4676	59.6648	49.2802
12.5	110.3842	95.7769	91.1964	81.6034	72.0105
15.0	146.4967	127.6820	122.5268	110.5369	98.5531
17.5	181.6261	163.4280	154.2312	140.3919	126.6895
20.0	236.9271	219.0574	201.2031	182.5462	164.6839
21.5	277.7931	256.4260	235.0688	213.6739	192.3164

压力  
(Mpa)

温度 (°C)

	350	370	390	410	430
0.10	0.3484	0.3375	0.3272	0.3176	0.3086
0.15	0.5230	0.5066	0.4912	0.4767	0.4631
0.20	0.6980	0.6759	0.6553	0.6360	0.6178
0.25	0.8732	0.8456	0.8198	0.7955	0.7726
0.30	1.0488	1.0156	0.9845	0.9552	0.9277
0.40	1.4010	1.3563	1.3144	1.2753	1.2377
0.50	1.7545	1.6983	1.6456	1.5961	1.5498
0.80	2.8227	2.7305	2.6440	2.5595	2.4884
1.10	3.9030	3.7700	3.6512	3.5384	3.4335
1.40	4.9945	4.8290	4.6673	4.5220	4.3857
1.70	6.0998	5.7779	5.6936	5.5120	5.3441
2.00	7.2186	6.9619	6.7290	6.5117	6.3130

2.50	9.1139	8.7802	8.4750	8.1938	7.9332
3.00	11.0494	10.6308	10.2493	9.9000	9.5775
3.50	13.0286	12.6162	12.0528	11.6308	11.2425
4.00	15.0539	14.4392	13.8862	13.3077	12.9991
4.50	17.1279	16.4018	15.7527	15.1451	14.6679
5.00	19.2627	18.4108	17.6565	16.9827	16.3719
6.00	23.7006	22.5570	21.5629	20.6900	19.9062
7.00	28.4037	27.0100	25.6330	24.5224	23.4021
8.00	33.4179	31.4825	29.8698	28.4969	27.2913
9.00	38.8083	36.3217	34.3044	32.2947	31.1593
10.0	44.7560	41.5274	39.0006	36.9344	35.1684
12.5	62.4178	56.1496	51.8212	48.5015	45.8023
15.0	86.5688	74.5840	66.8341	61.5530	57.5137
17.5	116.3142	100.8176	85.3228	76.6185	70.5711
20.0	151.1200	137.7965	108.5430	94.4945	85.3276
21.5	171.8651	150.0074	128.1614	106.6360	95.1366

压力  
(Mpa)

温度 (°C)

	450	470	490	510	530
0.10	0.3000	0.2919	0.2842	0.2769	0.2700
0.15	0.4502	0.4381	0.4270	0.4156	0.4052
0.20	0.6005	0.5842	0.5688	0.5500	0.5400
0.25	0.7507	0.7316	0.7113	0.6925	0.6757
0.30	0.8989	0.8856	0.8540	0.8320	0.8108
0.40	1.2035	1.1708	1.1396	1.1102	1.0821
0.50	1.5036	1.4648	1.4258	1.3888	1.3537
0.80	2.4171	2.3500	2.2869	2.2274	2.1720
1.10	3.3345	3.2402	3.1529	3.0710	2.9902
1.40	4.2575	4.3496	4.2291	3.9157	3.8143
1.70	5.1863	5.0374	4.8972	4.7665	4.6408
2.00	6.1203	5.9419	5.7811	5.6204	5.4725
2.50	7.6777	7.4937	7.2810	7.0799	6.8637
3.00	9.2642	8.8560	8.6020	8.3610	8.1330
3.50	10.8842	10.5512	10.2500	9.9499	9.6776
4.00	12.5087	12.1835	11.7570	11.4169	11.0994
4.50	14.1507	13.7009	13.2880	12.8950	12.5315
5.00	15.8139	15.3017	14.8021	14.3859	13.9749
6.00	19.1981	18.5495	17.9560	17.4029	16.8912
7.00	22.6635	21.8675	21.1460	20.4699	19.8506
8.00	26.0170	25.2640	24.3950	23.5905	22.8573
9.00	29.8733	28.4637	27.7100	26.7676	25.9068

10.0	33.6447	32.3002	31.0960	30.0116	29.0164
12.5	43.5431	41.5884	39.8800	38.3537	36.9936
15.0	54.2497	51.5265	49.1940	47.1249	45.3087
17.5	65.9331	62.1807	59.0520	56.3427	53.9875
20.0	78.7759	73.6858	69.6010	66.0602	63.0674
21.5	87.0939	81.0184	76.1667	72.1376	68.7108

压力  
(Mpa)

温度 (°C)

	550	570	590	
0.10	0.2634	0.2571	0.2512	
0.15	0.3953	0.3860	0.3768	
0.20	0.5271	0.5146	0.5026	
0.25	0.6591	0.6440	0.6284	
0.30	0.7913	0.7724	0.7540	
0.40	1.0556	1.0303	1.0062	
0.50	1.3204	1.2887	1.2585	
0.80	2.1164	2.0290	2.0168	
1.10	2.9170	2.8449	2.7774	
1.40	3.7183	3.6271	3.5401	
1.70	4.5230	4.4116	4.3056	
2.00	5.3322	5.1989	5.0745	
2.50	6.6858	6.5177	6.3582	
3.00	8.0486	7.8437	7.6498	
3.50	9.4197	9.1777	8.9480	
4.00	10.8003	10.5191	10.2533	
4.50	12.1894	11.8683	11.5650	
5.00	13.5885	13.2267	12.8850	
6.00	16.4119	15.9657	15.5440	
7.00	19.2745	18.7350	18.2314	
8.00	22.1742	21.5400	20.9500	
9.00	25.1124	24.3771	23.6949	
10.0	28.1000	27.2557	26.4738	
12.5	35.7414	34.6072	33.5541	
15.0	43.6680	42.1936	40.8349	
17.5	51.8985	50.0237	48.3269	
20.0	60.4493	58.1253	56.0402	
21.5	65.7370	63.1132	60.7719	