

# STEAM TABLE, SEALANTS, STEAM OIL CHART

Version 1.0 10/6/19

[www.npwoolley.com](http://www.npwoolley.com)

[www.facebook.com/npwoolleysteam](https://www.facebook.com/npwoolleysteam)



Have you got the latest version? Check our website and find more printable tools for your project!

SATURATED STEAM TABLE							
1 BAR = 100KPA							
GAUGE PRESSURE		TEMPERATURE		GAUGE PRESSURE		TEMPERATURE	
PSI	BAR	°F	°C	PSI	BAR	°F	°C
0	0.00	212.0	100.0	205	14.13	389.8	198.8
5	0.34	227.1	108.4	210	14.48	391.7	199.8
10	0.69	239.4	115.2	215	14.82	393.6	200.9
15	1.03	249.7	121.0	220	15.17	395.5	201.9
20	1.38	258.7	126.0	225	15.51	397.3	202.9
25	1.72	266.8	130.4	230	15.86	399.1	203.9
30	2.07	274.0	134.4	235	16.20	400.9	204.9
35	2.41	280.6	138.1	240	16.55	402.6	205.9
40	2.76	286.7	141.5	245	16.89	404.4	206.9
45	3.10	292.4	144.6	250	17.24	406.0	207.8
50	3.45	297.7	147.6	255	17.58	407.7	208.7
55	3.79	302.6	150.3	260	17.93	409.4	209.6
60	4.14	307.3	153.0	265	18.27	411.0	210.6
65	4.48	311.8	155.4	270	18.62	412.6	211.4
70	4.83	316.0	157.8	275	18.96	414.2	212.3
75	5.17	320.0	160.0	280	19.31	415.7	213.2
80	5.52	323.9	162.2	285	19.65	417.3	214.0
85	5.86	327.6	164.2	290	19.99	418.8	214.9
90	6.21	331.2	166.2	295	20.34	420.3	215.7
95	6.55	334.6	168.1	300	20.68	421.8	216.5
100	6.89	337.9	169.9	305	21.03	423.2	217.4
105	7.24	341.1	171.7	310	21.37	424.7	218.2
110	7.58	344.2	173.4	315	21.72	426.1	219.0
115	7.93	347.2	175.1	320	22.06	427.5	219.7
120	8.27	350.1	176.7	325	22.41	428.3	220.2
125	8.62	352.9	178.3	330	22.75	430.3	221.3
130	8.96	355.6	179.8	335	23.10	431.7	222.0
135	9.31	358.3	181.3	340	23.44	433.0	222.8
140	9.65	360.9	182.7	345	23.79	434.4	223.5
145	10.00	363.4	184.1	350	24.13	435.7	224.3
150	10.34	365.9	185.5	355	24.48	437.0	225.0
155	10.69	368.3	186.8	360	24.82	438.3	225.7
160	11.03	370.6	188.1	365	25.17	439.6	226.4
165	11.38	372.9	189.4	370	25.51	440.8	227.1
170	11.72	375.2	190.7	375	25.86	442.1	227.8
175	12.07	377.4	191.9	380	26.20	443.3	228.5
180	12.41	379.6	193.1	385	26.54	444.6	229.2
185	12.76	381.7	194.3	390	26.89	445.8	229.9
190	13.10	383.8	195.4	395	27.23	447.0	230.5
195	13.44	385.8	196.6	400	27.58	448.2	231.2
200	13.79	387.8	197.7	405	27.92	449.4	231.9

LIVE STEAM BOILER CODES	
CHECK APPLICABLE CODE	
<b>AMBSC code Part 3 sub- miniature boilers</b>	
Low pressure boiler	Up to 200kPa (29.0psi)
Medium press. Boiler	From 200kpa (29.0psi) To 520kPa (75.4psi)
<b>AMBSC Code part 1 Copper boilers</b>	
	Up to 689kPa (100psi)
<b>AMBSC Code part 2 Steel boilers</b>	
	Up to 689kPa (100psi)
<b>AMBSC Code part 4 Duplex steel boilers</b>	
	Up to 689kPa (100psi)

INDUSTRY BOILER CODES	
CHECK APPLICABLE CODE	
<b>AS1228 - Pressure equipment - Boilers</b>	

O-RINGS/RUBBERS				
CHECK TEMP & PRODUCT SPEC. BEFORE SELECTING				
Material	Farenheit (°F)		Celsius (°C)	
	Min.	Max.	Min.	Max.
Polyurethane	-40	180	-40	82
Neoprene	-35	225	-37	107
Nitrile (low temp)	-65	225	-55	107
Nitrile (general service)	-30	250	-34	121
Ethylene Propylene (EPDM)	-70	250	-57	121
Butyl	-75	250	-59	121
Hydrogenated nitrile	-23	300	-32	149
Polyacrylate	-5	350	-21	177
Flourosilicone	-100	350	-73	177
Flourocarbon	-15	400	-26	205
Hifluor	-15	400	-26	205
AFLAS	-25	450	-4	232
Silicone	-65	450	-54	232
Perfluoroelastomer (Parofluor) VITON	-15	500	-26	260

# STEAM TABLE, SEALANTS, STEAM OIL CHART

Version 1.0 10/6/19

[www.npwoolley.com](http://www.npwoolley.com)

[www.facebook.com/npwoolleysteam](https://www.facebook.com/npwoolleysteam)



Have you got the latest version? Check our website and find more printable tools for your project!

GASKETS				
CHECK TEMP & PRODUCT SPEC. BEFORE SELECTING				
Material	Fahrenheit (°F)		Celsius (°C)	
	Min.	Max.	Min.	Max.
Insertion Rubber	-4	158	-20	70
Nitrile Rubber	-4	226	-20	108
Gasket Paper	-4	248	-20	120
Neoprene Rubber	-22	248	-30	120
EPDM Rubber	-40	248	-40	120
Cork	-13	275	-25	135
PTFE (Teflon) Other products such as Durlon 9000 & Garlock G3510 have higher temp	-99	399	-73	204
Styrene Butadiene Rubber (SBR)	-58	414	-50	212
Natural Rubber	-76	428	-60	220
Viton Rubber	-13	482	-25	250
Silicone Rubber	-76	572	-60	300
CNAF (Compressed Non-Asbestos Fibre)	-148	752	-100	400
Flexible Graphite (non-oxidised environment only)	-400	1832+	-240	1000+

SEALANTS, LOCTITE ETC				
Material	Fahrenheit (°F)		Celsius (°C)	
	Min.	Max.	Min.	Max.
Boston thread sealant (sets hard)	14	275	-10	135
Loctite 567 white thread sealant (remains soft)	-67	302	-55	150
Loctite 577 yellow thread sealant (sets hard)	-67	302	-55	150
Loctite 638 super retaining compound	-67	302	-55	150
Loctite 510 flange sealant for rigid assemblies	-65	399	-54	204
Permatex RTV silicone (clear)	-74	399	-59	204
Etch primer		428		220
PTFE thread tape	-450	500	-268	260
Permatex hi-temp RTV silicone (red)	-65	649	-54	343

GLAND PACKING								
Material	Fahrenheit (°F)		Celsius (°C)		Max pressure (rotary)		Max surface speed	
	Min.	Max.	Min.	Max.	PSI	BAR	fpm	m/s
PTFE packing Klinger K54S			-240	280			984	5
Garlock 1306 flexible graphite packing	-328	600	-200	315.5	500	34.5	3000	15.24
Garlock G-200 graphite packing	-328	850	-200	455	500	34.5	4000	20.32
Garlock 1333-G graphite packing	-328	850	-200	455	600	41	4800	23

STEAM OIL				
Type	Pressure	Steam °F	Steam °C	Steam type
Morris compound 460 steam cylinder oil	Up to 175psi	Up to 450	Up to 230	Saturated
Morris compound 680 steam cylinder oil	Up to 175psi	Up to 450	Up to 230	Saturated
Morris compound 1000 steam cylinder oil	Up to 250psi+			Saturated or superheated

FUSIBLE PLUG METAL				
GUIDE ONLY- CONSULT YOUR BOILER INSPECTOR & RELEVANT/NEWEST BOILER CODE				
Type	Boiler Pressure	Metal melting point		Boiler code
		°F	°C	
Commercially pure tin	Up to 100psi	449	232	AMBSC Code Part 1 Copper boilers - Issue 8 2012
Commercially pure tin	Up to 100psi	449	232	AMBSC Code Part 4 Duplex boilers - Issue 1 2010