

Pyrometric Cone Chart

Pyrometric cones are designed to deform at certain moments during a firing. This deforming action allows us to either shut the kiln off at the proper point (as in the case of the mini bar and Kiln Sitter) or simply to record what happened during the firing (as in the case of the witness cone). The exact moment the cone deforms depends primarily upon two factors: time and temperature. The temperature present at the moment "cone" is achieved depends upon the rate of temperature increase. With this simple concept in mind it's easy to understand why "cone" and temperature is not the same thing. For a proper cone firing, time and temperature must always be considered.

The chart on the next page attempts to do the impossible by assigning a temperature to a cone number. The values given are valid only when the rate of temperature increase is controlled as per the chart.

Pyrometer Users:

Because of the time/temperature relationship of the cone, it's not recommended that you attempt to calibrate a pyrometer using a cone.

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Please note that the Cone Chart gives 3 different temperatures for each cone number. As discussed above, the equivalent cone temperature depends upon how fast one gets to it. Generally speaking, the temperatures in the 108°F - 60°C column are used when discussing ceramics, porcelain, china and pottery.

Heating Rate °/hour During Last 90 to 120 Minutes of Firing

Cone	27°F - 15°C	108°F - 60°C	270°F - 150°C
022		1087°F - 586°C	1094°F - 590°C
021		1112°F - 600°C	1143°F - 617°C
020		1159°F - 626°C	1180°F - 638°C
019	1213°F - 656°C	1252°F - 678°C	1283°F - 695°C
018	1267°F - 686°C	1319°F - 715°C	1353°F - 734°C
017	1301°F - 705°C	1360°F - 738°C	1405°F - 763°C
016	1368°F - 742°C	1422°F - 772°C	1465°F - 796°C
015	1382°F - 750°C	1456°F - 791°C	1504°F - 818°C
014	1395°F - 757°C	1485°F - 807°C	1540°F - 838°C
013	1485°F - 807°C	1539°F - 837°C	1582°F - 861°C
012	1549°F - 843°C	1582°F - 861°C	1620°F - 882°C
011	1575°F - 857°C	1607°F - 875°C	1641°F - 894°C
010	1636°F - 891°C	1657°F - 903°C	1679°F - 915°C
09	1665°F - 907°C	1688°F - 920°C	1706°F - 930°C
08	1692°F - 922°C	1728°F - 942°C	1753°F - 956°C
07	1764°F - 962°C	1789°F - 976°C	1809°F - 987°C
06	1798°F - 981°C	1828°F - 998°C	1855°F - 1013°C
05-1/2	1839°F - 1004°C	1859°F - 1015°C	1877°F - 1025°C
05	1870°F - 1021°C	1888°F - 1031°C	1911°F - 1044°C
04	1915°F - 1046°C	1945°F - 1063°C	1971°F - 1077°C
03	1960°F - 1071°C	1987°F - 1086°C	2019°F - 1104°C
02	1972°F - 1078°C	2016°F - 1102°C	2052°F - 1122°C
01	1999°F - 1093°C	2046°F - 1119°C	2080°F - 1138°C
1	2028°F - 1109°C	2079°F - 1137°C	2109°F - 1154°C
2	2034°F - 1112°C	2088°F - 1142°C	2127°F - 1164°C
3	2039°F - 1115°C	2106°F - 1152°C	2138°F - 1170°C
4	2086°F - 1141°C	2124°F - 1162°C	2161°F - 1183°C
5	2118°F - 1159°C	2167°F - 1186°C	2205°F - 1207°C
5-1/2	2133°F - 1167°C	2197°F - 1203°C	2237°F - 1225°C
6	2165°F - 1185°C	2232°F - 1222°C	2269°F - 1243°C
7	2194°F - 1201°C	2262°F - 1239°C	2295°F - 1257°C
8	2212°F - 1211°C	2280°F - 1249°C	2320°F - 1271°C
9	2235°F - 1224°C	2300°F - 1260°C	2336°F - 1280°C
10	2284°F - 1251°C	2345°F - 1285°C	2381°F - 1305°C

Special Thanks to [The Edward Orton Jr. Ceramic Foundation](http://www.edwardorton.com) for the use of cone/temperature data.