

Kiln Glaze Firing for Buttery Matte Glazing

from Steven Hill (accessed 9-14-2013 from

<http://ceramicartsdaily.org/firing-techniques/electric-kiln-firing/glazing-and-firing-techniques-atmospheric-like-effects-in-an-electric-kiln/>)

If you want similar results from an electric kiln, especially when firing to cone 6, one of the most important things you can do is emulate the heating and the cooling cycles of larger kilns. This means slowing the temperature gain to about 100°F (38°F) an hour during the last several hours of the firing, soaking the kiln at the top temperature, and then down-firing to slow the cooling cycle. Electric kilns are built with thinner insulation and legs (to allow for air circulation), and they cool very quickly, especially at higher temperatures. If you are seeking buttery, matte surfaces but have trouble achieving them in the electric kiln, it is most likely due to fast cooling. Matte surfaces are usually caused by microcrystal growth during cooling, and, if the cooling cycle is too steep, there isn't enough time for crystals to develop. In extreme cases, I've even seen matte glazes go glossy and transparent.

Currently I am cooling the kiln naturally from the top temperature down to 1700°F (927°C), down-firing for five hours between 1700° and 1500° (816°C), and then cooling naturally. With this cycle, I am achieving some of the best microcrystalline formations I have ever had!

In electric firing—and especially at cone 6—it is natural to achieve flat, solid colors that look more paint-like than glazes in reduction firing. If you are seeking a softer effect with more variation and atmospheric qualities, it is up to you to achieve it through glaze application.

If you apply thin coats of two or more contrasting glazes, they will intermingle as they melt, but the layers never mix thoroughly. The result shows up as soft and subtle surface variation.

Layering similar glazes will create subtle variations, while using highly contrasting glazes can lead to more drama. If you alternate matte and glossy glazes in layers, it will encourage surfaces to break. If you layer light and dark colors, you will get variation in both color and value. Most of my pots have four to eight glazes applied in overlapping layers, and my biggest challenge is making everything look cohesive.