



THE TRUTH ABOUT CRAZING

IT'S KIND OF A LONG STORY...

With 2008 came the introduction of Blue Label Bisque. (Cue the choir of angels singing!) Our new and improved clay body allows a broader range of conditions while maintaining an incredibly high success rate. Blue Label Bisque (BLB) is built for compatibility specifically with Duncan, Gare, and Mayco glazes. We carefully test every batch of bisque to ensure proper performance with different glazes. Why is this important? Because there's a whole lot of technical mumbo jumbo that goes down when you shut that kiln lid--but basically, you want your bisque and your glaze to be really good friends.

So, why does crazing happen? How can we fix it? Crazing can happen several ways. (Warning, technical mumbo jumbo ahead.) Bisque is designed to have a surface tension (or grip) with the glaze as the mating surface. Glaze, when fired to Cone 06, becomes a liquid glass material that bonds to the bisque surface at a molecular level. This chemical reaction is induced by heat and allows the bisque molecules to bond with the glaze molecules and become fused. This is the critical reaction between glaze and body that is required for the long term performance of the final piece.

The first step to reduce crazing is heat! We need the glaze and the body to bond - and this takes time and heat. If this does not happen - then crazing can and will occur. If you're experience crazing, try a hotter Cone 05 firing. In addition, you may try adding a 5-15 minute hold to your Cone 06 firing. This allows for all areas of the kiln to take a breather and achieve a uniform temperature. This isn't always necessary--but it's a great insurance policy against crazing!

The second step to reduce crazing is the cool down. One word: S-L-O-W. The glaze and bisque body are having bonding time together in order to be married for eternity (Aw!) Don't rush it! At 1000 degrees, the glaze converts from a liquid solution to a solid body known as the "phase transformation" in ceramics.

It is important to avoid fans or vent cooling around the kiln firing. If a small area of a glaze surface becomes cooled, yet the bisque body is still hot - a small fracture will occur. You won't be able to see it, but the combination of temperature variations and time will stretch these cracks across the whole piece.

Wait until at least 450 degrees before cracking the kiln. You can thermally shock ceramics by opening the kiln any higher than 150 degrees. Bottom line : If a kiln load is cooled too rapidly - it can (and probably will) cause crazing.

With this in mind, how your kiln fires is so important. Are all levels of the kiln correctly firing to Cone 06? Witness cones are key to the prevention and diagnosis of kiln firing irregularities.

So - make sure the kiln is getting hot to cone 06 in all areas, and do not cool too rapidly as described above. This will ensure successful kiln firing and happy customers. SCORE!

GIVE ME THE SPARK NOTES!

TURN UP THE HEAT! Fire to Cone 05 or hold your Cone 06 firings for 15 minutes to allow for uniform heat in your kiln load.

CHILL OUT! Wait until 450 degrees to crack the kiln, and 150 degrees to open it. Anything faster increases the risk of crazing.

NOT A FAN! Forced air (fans, vents, etc.) can cause stress on the pieces inside the kiln

CAN I GET A WITNESS? If you want to predict and prevent crazing--use witness cones. Every time.