

Glaze Troubleshooting

1. Pinholes and Pitting- As glazes and clay bodies mature, volatile materials are released resulting in boiling and agitation of the glaze. Common causes are under fired bisque releasing excess gas or an incomplete glaze firing cycle caused bubbles to freeze, causing pinholes and craters. Other causes: too rapid heating or cooling of the kiln or too thick a layer of glaze. To save the piece, cover with a thin coat of glaze and refire.

2. Blistered and Bubbled Glaze- Similar to pin holes and pitting the glaze did not have enough time at temperature and the bubbles solidified. Possible causes are too thick a layer of glaze or insufficient drying time of the glazed piece prior to firing. To save the piece the bubbles and blisters can be sanded down , covered with a thin coat of glaze and refired.

3. Craters- Craters are due to under fired glaze. To save the piece dab glaze in the craters and refire.

4. Color Peels Off- This condition is usually the result of too heavy an application of the glaze or dirty bisque from oil or grease from dirty hands or from too rapid cooling.

5. Crazeing- This is a fine network of cracks on the glazed surface. It is caused by underfired bisque or incompatible thermal expansion between clay and glaze or by cooling too rapidly. Crazeing can corrected by refiring the piece one cone higher than the original firing. Some crazeing can occur several months after the firing.

6. Cracks- Cracks are sometimes caused by uneven or too rapid heating or cooling of the kiln. If the edges if the crack are sharp it occurred during the cooling of the kiln. If the cracks are rounded or smooth the cracks occurred when heating. To prevent this in future firings slow the heating rate and do not pull the observation plugs while the kiln is hot to force cool the kiln. Cracking is sometimes caused by glazes that are not compatible such as a mug or vase with clear glaze on the inside and colored glaze on the outside.

7. Crawling or Glaze Creeps- Bare spots can appear in the glaze surface after firing. This can be the result of dusty, dirty bisque or oil and grease from dirty hands. The latter causes the glaze to repel from these spots. Under firing or firing the piece before the glaze is totally dry will also cause creeping. To save the piece apply additional glaze to the bare spots and refire.

8. Shivering- This is characterized by chips or flakes of glaze that peel off after the piece has cooled. This is caused by an incompatibility between the clay and the glaze. There is no way to save the piece.

9. Metallic Problems- Metallics will appear dull if applied to sparingly or are under fired. Over firing or too heavy an application of glaze will result in cracking. Under fired metallic can be refired to the proper cone.

10. Black Specks or Spotting- This is usually the result of contamination from dirt. Contamination can be introduced by several things- a dirty brush, dirty green ware, dirty bisque, a dirty glaze container or a dirty kiln. Make sure all of the above are kept clean.