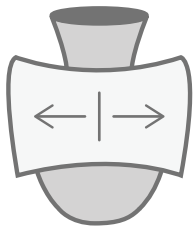


# SHIVERING

will happen when the bisque and glaze shrink at different temperatures at certain points in the firing. If the bisque shrinks more than the glaze, then the glaze will 'shiver' or fall off the ware.



Think of the glaze as an oversized piece of fabric, covering a smaller surface. Clay or slip used in the making of the bisque does not fit the glazes and therefore creates an incompatibility of fit between the bisque and color and/or glaze. There can be multiple causes of this problem.



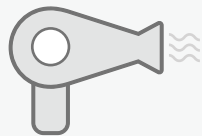
## POTENTIAL CAUSES



Clay is mined from the earth and is an inexact science. Bisque suppliers are continuously getting their bisque from multiple suppliers from different parts of the world. This means there are more types of bisque being introduced into the marketplace all the time.



Firing wet glaze. When heated, the moisture from the color can turn to steam and cause a poor fit between color and bisque. *Note: Some colors are more susceptible to others in this situation.*



Using a hairdryer to dry the color and/or glaze.



Firing too fast—should be a medium speed.

# FYI



**Note:**

*With so many potential causes, it can be quite difficult to diagnose the problem. To help diagnose almost any ceramic issue, it is recommended a studio keep a thorough log of problems which includes such things as the type of bisque used and color used, application of color, where on the piece the shivering occurred, etc.*

# POTENTIAL SOLUTIONS



Make sure that the bisque firing is two cones hotter than the glaze firing.



Limit the “rushing” of the ceramic process either by firing too fast, using hair dryers or firing potentially wet color or glaze.



Make sure you are applying the glaze properly i.e. not applied too heavy.



Make sure hands are clean and the bisque is wiped down with a damp sponge before painting so any dust or oils from lotions or food have been cleaned from the surface.



Avoid overapplication of glaze on rims or edges of ware. *For example: It is easy to apply three coats of glaze to the inside of a bowl all the way to the rim. Then apply three coats of glaze on the outside and cover the rim. Now there are six coats of glaze on a curved surface. This may contribute to shivering.*