

IN DEPTH: Glazing Porcelain

by: Helen Schaeffer, DDMEd.

The popularity of half dolls, dresser jars and other decorative items that need to be glazed has created a renewed interest in glazes and their application techniques.

A glaze is a product composed of silica, flux and alumina, with the addition of oxides and carbonates of metals to give glazes their colors and cause them to be either transparent or opaque. Simply put, a glaze is actually glass, which melts and flows during firing, then hardens into a glossy surface during the cooling process. This article will deal only with the clear, transparent glazes used most often by the dollmaker.



While there are countless glazes on the market, it is most important that the glaze you select fits the porcelain or stoneware body you wish to glaze. This means that the glaze and the body on which it is fired (greenware or bisque) must both expand and shrink a similar amount during the firing process. If the fit is incorrect, there will be crazing or shivering of the glaze; therefore, the safest choice would be a glaze made by the same manufacturer of the clay body you intend to use. Seeley's manufactures several glazes, but first we'll look at Clear Gloss Galaxy Glaze, available in 4 oz. jars, pints and gallons with a firing range of cone 4 - 6.

Application

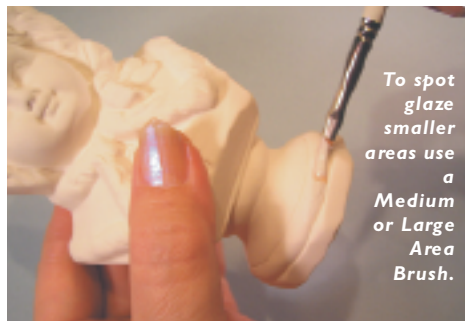
Applying the glaze directly to dry greenware or soft-fired ware (fired to cone 018) is the preferred method of application and will give the smoothest results. Rinse the soft-fired pieces to make sure the ware is dust free, then allow the ware to thoroughly dry. Choose a soft brush such as Seeley's Glaze Brush to apply 3 - 4 coats of glaze. Glazes



Use a Glaze Brush to apply glaze to large areas.

should be flowed on generously. If you press down on the brush too hard you will remove some of the glaze, resulting in starved areas which will appear gritty after firing. You must not, however, allow glaze to puddle in eyes or other deep, indented areas in the piece. Allow the glaze to dry between coats. If a coat of glaze is not dry before you apply a subsequent coat you will remove some of the previous application.

Perhaps you would like to add a touch of shiny gold to your porcelain piece? This requires spot glazing of only those areas which will be later decorated with Liquid Bright Gold. Choose a soft brush--such as a Medium or Large Area Brush--in an appropriate size for the area you wish to glaze and apply two to three coats of glaze. After bisque firing, these areas will be ready for the application of gold or other metallic overglaze of your choice.



To spot glaze smaller areas use a Medium or Large Area Brush.

Firing

Fire the ware to cone 4 - 6 (2200°F or 1200°C). DO NOT STILT THE WARE. Firing to the cone required to mature the porcelain would cause the clay to soften so that stilts would become permanently imbedded in the ware. Porcelain must be "dry footed" before firing. This means glaze must be removed from the bottoms of all pieces. This is easily accomplished with a damp Synthetic Sponge or Super Doll Sponge.

Also available from Seeley's is a high-fire semi-transparent glaze with a satin finish: Full Moon Galaxy Glaze. Application and firing are the same as for the Clear Gloss Galaxy Glaze. This glaze is a wonderful alternative for dresser jars and other decorative items when you want a less glossy finish.

Low Fire Clear Glaze

What if you decide to glaze an item that has already been bisque fired or if you want a glaze that will fire at a lower cone? Seeley's Sparkle Clear Glaze is a cone 06 (1873°F) glaze developed for high-fire porcelain, stoneware and earthenware bisque. The application of this glaze is a bit different. Glaze applied to porcelain bisque takes a

longer time to dry. When applying a second or third coat you can easily remove some of the previous coat. It is very important to flow the glaze onto the previous coat. To speed up drying time, place the ware in an oven at 150°F. Glaze applied to warm bisque dries more quickly, and the previous coat of glaze is less likely to lift off.

Glazing Troubleshooting and Tips

- ¥ Lidded boxes pose a special problem. The flange on the box and its lid cannot be glazed or else they will fuse together in the bisque firing, but for a good fit the two halves of the box need to be fired together with a coating of Firing Separator between them. Glaze both halves of the box. Use a damp Synthetic Sponge or Super Doll Sponge to carefully remove any glaze from the flange and any part of the lid it touches before applying Firing Separator with a Medium or Large Area Brush.
- ¥ The easiest way to glaze the insides of mugs or boxes is to pour a generous amount of glaze inside the piece, roll the glaze around for full coverage and drain the excess back glaze into the glaze container.



To glaze the inside of a porcelain piece pour glaze inside and roll it around for full coverage.

- ¥ Cooling or opening the kiln too quickly can cause crazing of the glaze. Sometimes this problem can be corrected by adding another coat of glaze and re-fire to one cone cooler than the previous firing.
- ¥ A grainy look or feel to the glaze is caused by insufficient coverage. To remedy this problem add another coat of glaze and re-fire.
- ¥ It should be noted that all of Seeley's clear glazes are lead free, so they are perfectly safe to use on items that will come in contact with food and drink.

All glazes, brushes and other supplies available from Seeley's.



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