

The Advantages of Stoneware Bisque

By Rich Zumpone of Mayco Colors



Pre-made bisque shapes have become a staple offering in Paint Your Own Pottery Studios and a timesaving alternative for potters who need a large number of identical shapes for a project or for a class. Much of the bisque that's available in low-fire earthenware, but an increasing number of stoneware shapes are now offered, which opens the door to trying out high-fire cone 6 glazes and creating utilitarian as well as decorative ceramic ware.

Earthenware vs. Stoneware

Earthenware bisque is made using low-fired clay, which typically matures at cones 04 or 03. Earthenware bodies are porous (absorb water), lightweight, and shrink less than mid-range or porcelain bodies. Earthenware kiln firings use less energy and have shorter firing-to-cooking cycles, so a kiln can be loaded and fired again in less time than with a stoneware firing. However, if used in an oven, microwave, or dishwasher, the repeated expansion and contraction as the earthenware is heated and cooled will eventually cause cracks and crazing to develop in the glazed surface which could lead to food-safety issues.

Mayco's stoneware bisque is made using a mid-range clay body that is designed to mature at cones 4 through 7. Fully fired stoneware is vitreous - the clay particles have fused completely, sealing all pores in the fired body and making it impervious to water. Where earthenware bodies may shrink 5 to 6 percent during firing, stoneware bodies shrink 10 to 15 percent. Stoneware is sturdier, more chip-resistant and better able to handle thermal shock than earthenware so it can better handle repeat use in microwaves, ovens and dishwashers.

Stoneware bisque is often soft fired (cone-04-03) to help with the glazing process. At this stage, the bisque is still porous, and a porous surface improves a glaze's ability to grab hold and adhere. Normal, the bottom of a stoneware piece is not glazed - this is called "dry-footing". Dry-footed pieces can be placed directly on a kiln shelf for firing. Because earthenware is porous, it needs to be completely covered with glaze to create a watertight and food-safe surface, as any exposed bisque will absorb moisture. Earthenware with glaze on the bottom must be stilted for firing so that the glaze won't stick to the kiln shelf.

Glazing Stoneware

Stoneware (cone 6) glazes offer depth and intriguing combination possibilities to artists working at mid-range to high-fire temperatures. The palette is varied in colour and finish, featuring matte, glossy bright colours, and breaking glazes as well as complex float surfaces. Mayco's Stoneware Ice glazes and Opal Glazes offer beautiful translucent finishes for use over design or for adding a splash of colour. These stoneware glazes are non-toxic and food safe.

You don't have to use high-fire glazes on stoneware however. Cone 06 glazes can be applied to stoneware bisque that's been fired to Cone 5 or 6. After glazing, simply re-fire the ware to cone 06.

Like cone 06 glazes, stoneware glazes can be applied by brushing, dipping, or spraying (always use a respirator when spray applying). The order in which stoneware glazes are applied will affect the fired results, as will the number of coats you apply. When combined with low-fire (cone 6) glazes stoneware glazes will move more than they normally would.

