Commercial Bisque Tiles at Midrange Temperature

by Paul Lewing

For about the last eleven years, I've used bisqued tile blanks for murals and trivets. I have opted for them over making my own tiles for many reasons. They are much cheaper than making your own; they cut down the time required for a job enormously; and they will usually module with field tile of the same brand in jobs where only part of a wall is tiled. But the most important consideration is simple old-fashioned craftsmanship. I can't make tiles as flat, as thin, as square, or as consistent as commercial blanks.

For most of the time, I've used blanks by **American Olean**. They were wonderful. They were cheap, they would go clear to cone 10, and they neither shrank nor warped. They could be fired on very uneven shelves or hung off the edge of a shelf without sagging. Lord knows what they were made of- certainly no clay material that you or I have ever had access to!

Unfortunately, when **Dal-Tile** bought out AO a few years ago, they decided not to continue selling these tiles. Another customer screwed by a corporate takeover! So for the last year, I've been testing every brand of commercial bisqued tile I can find.

Before I start naming names, let me tell a bit about what I do with these tiles. I make custom murals, usually landscapes, and a wholesale line, consisting of trivets with extruded porcelain borders and single tiles set in wooden frames. These frames are also commercially made, so the tiles must fire to a size no bigger than 6 1/16" and no smaller than 5 15/16". I fire to about cone 4, by putting a cone 5 bar in the automatic shutoff and letting the kiln shut itself off and cool naturally. I use an enormous variety of glazes, sometimes as many as 40 on a large mural. There are tremendous differences in chemistry, glaze fit, Al/Si ratio, and surfaces. I care much more about color and how a glaze reacts with other glazes than I do about stability, solubility, food safety, or even fit. Incidentally, I find that any commercial tile will have a wider range of acceptable coefficient of expansion than any wet clay body. This means that crazing and shivering are much less of a problem, or are at least less obvious on commercial tiles.

So far I have tested tiles by **Dal-Tile**, **B&W**, **Monarch**, **Huntington Pacific**, **Westminster**, **Mannington**, **US Ceramics** and **H&R Johnson**. None of these is anywhere near as nice as AO was, but some are close.

Most of these tiles are lowfire talc body tiles, and have real problems going to cone 1 or above. Many glazes, particularly those with Al/Si ratios above 1:12, and those with more than about .4 molecular equivalents of Boron, will soak right into the tile, leaving a very dry surface. They also warp or sag if not fired on perfectly flat surfaces.

Dal-Tile, **B&W**, and **Westminster** are truly lowfire tiles, and are really unacceptable at midrange temperatures. **B&W** tiles also split in firing at an unacceptable rate.

Monarch, and even more so **Huntington-Pacific** tiles, are usable at the temperature I fire to, although the **Monarch** tiles shrink too much to fit the frames I use, and might not module with other **Monarch** field tile.

US Ceramics tiles are also usable at cone 5, but are a bit thin for my frames, and the glazes take quite a long time to dry, which slows down the handling required to finish the edges and stack in setters.

H&R Johnson tiles accept all my glazes beautifully, and produce a very nice finished product. They are, however, quite thin. I would hesitate to put them on a countertop, although they would be fine for wall tile. They are too thin to fit my frames, but they make a very nice lightweight trivet.

Mannington tiles are very nearly as good at accepting glazes as **H&R Johnson**, and are the right size and thickness for the frames I use. So at this point, I'm using them for that item and the Johnson tiles for everything else.

However, neither of these two tiles fires pure white. Both are noticably yellow, which could be undesirable for people using clear glazes.

I had thought to also rate all these tiles for cost, but I realized that this would vary widely according to where you lived. Besides, all these tiles are cheaper than making your own, especially if you count your time for anything. The **H&R Johnson** tiles may be the most expensive in America, because they're made in England.

The bottom line is that I wish I could still get those American Olean tiles.

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