
Structural Glazed Facing Tile: Is It Really All That Different? No, Not Really!

Structural Glazed Facing Tile: Is it really all that different? No, not really! Structural Glazed Facing Tile has withstood the tests of time. This material has stood up to generations of use in tough-duty areas like schools, hospitals, food processing plants, tunnels, airports, train and subway stations. SGFT has also done hard time in prisons, public buildings, water treatment facilities, military installations, and animal facilities.

Everyone recognizes SGFT. Most likely, it was in the schools you attended growing up. It is probably in children's schools, still shining and looking as good as the day it was installed. What other interior wall system can make that claim after decades of being in service (except a clay brick, perhaps)? SGFT is closely related to clay brick in many ways. SGFT is manufactured using an extrusion process, like most brick. The major differences between the two products are:

- For the most part, pure fire clay is used for the body of the tile. No color additives or shale is added, unlike brick; therefore, the body is a buff color after firing.
- The clay is ground to an "18-mesh" granular size-much finer than most brick. The finer grind helps neutralize and control impurities and also adds to the density and strength of the product. The most visible reason for the finer ground clay is to allow the ceramic glaze to be fired into the body for a smooth, even and impervious finish.

The ceramic glaze also contains clay of a different type that is even a finer mesh. Color additives and a few other ingredients are milled together to make up the ceramic glaze. These glazes are prepared in our own laboratory to our own specific color formulations. The glaze is applied to "green" (unfired) extruded clay bodies, essentially a process of applying clay to clay. The units are then fired in gas fuelled tunnel kilns at temperatures of over 2000°F. These extreme firing temperatures allow several processes to take place. First the clay glaze and clay body fuse together into a homogeneous mass. It is an inseparable bond and will not peel, flake or fade. Second, the clay body becomes a very strong, solid, dense mass that has a very low absorption rate. SGFT also has ratings of 0 Smoke Density, 0 Flame Spread, 0 Fuel Contribution and 0 Fumes Emitted.

The standards demanded for Structural Glazed Facing Tile in ASTM C-126 are very stringent. The minimum compressive strength standard for SGFT vertical cell units is 3,000 psi. Elgin Butler's units meet or exceed this standard. In comparison, a CMU block in ASTM C-90 is required to meet a minimum compressive strength of only 900 psi. SGFT's added strength can help reduce wall thicknesses in many cases, giving an owner more usable space and reducing costs. Sizing and glaze requirements are also explained in ASTM C-126. Typically the Grade "S" (Select) joint size for 4W and 8W Series tile is 3/8", just like an HBK brick, while the joint size for the 6T Series is 5/16". The architect can also specify a Grade "SS" for even stricter tolerances.

One difference between SGFT and face brick is that the structural clay products industry uses specific nomenclature to describe each SGFT shape and glazed sides. The first number is the nominal length-just double it. Next comes a letter, which is the height: "S" for a single brick or 2-1/4" height; "D" for a double brick height or 5" (3 courses out to 16" with the joints); "T" for a triple deck equivalent, which is also the 5" height; and "W" for the whopper (?) or an 8" height. The numbers and letters following describe either a square or bullnose edge and which sides will be exposed and require glazing.

