



with a textured surface.

**Mosaic tiles** are distinguished from other kinds of tile by their small size, which must not exceed 6 square inches (2.45 by 2.45 inches if square shaped). The most common types are natural clay and porcelain, in which the color is throughout the tile rather than being applied on the surface such as a glaze. However, glazes may be applied as well. Porcelain ceramic mosaic tiles are always vitreous (natural clay) or impervious (porcelain). Therefore, they have a very low water absorption rate of less than 0.5 percent. They have a harder, denser body than non-vitreous wall tile. Glass mosaic tiles are also available.

Mosaics are usually sold face-mounted with paper, back-mounted with a mesh or plastic tab backing, or mesh-backed in 12-by-12-inch or 12-by-24-inch sheets. Mounted sheets facilitate installation and control the evenness of spacing.

**Quarry tile** is made from shale, clays, or earth extruded to produce an unglazed product that has color throughout the tile body. There is a great variety of quality levels within the broad term “quarry tile.” The earthen clay tiles may be very soft and irregular in shape. Other types of quarry tile are so porous they require a penetrating sealer to protect the surface. Before such a sealer is applied, the tile and grout must be allowed to cure. New sealer products have been formulated to minimize the cure time. Depending on the product used, this curing process can take as little as 48 hours or as long as two weeks. Other so-called quarry tiles must be stained and sealed. If such extra steps in the installation process must be completed, the designer should include the extra costs incurred in the estimate.

Certain manufacturers’ quarry tiles meet the standards of the American National Standards Institute (ANSI) and are considered

*In addition to evaluating a surface material for a specific application and understanding the installation requirements, designers should also consider the sustainability aspects of the materials. Photo courtesy of Jenn-Air*

stain-resistant, although not stain-proof. Thus, application and renewal of a sealer is optional. To achieve the subtle patina or rich glow of natural quarry clay, seasoning the tile with oil-based cleaner is preferred to sealing.

**Concrete** is a specialized countertop surfacing material. Molded into shape, it is seamless. Concrete can also be dyed just about any color. Concrete countertops can be fabricated at the manufacturing facility or poured in place. Because it begins in the form of a slurry, concrete can be transformed into virtually any shape that becomes a solid mass. It can be polished, stamped, or stained. Objects can be embedded in it. While it has a rougher appearance than granite or solid surfacing, with hairline cracks and surface imperfections, these qualities make it appealing to many. Like granite and other natural stone materials, upkeep is minimal, but it must be sealed to prevent stains.

At first glance, designers might consider a **glass countertop** only for the most dramatic of areas. Manufacturers of glass countertops present the surface as a maintenance-free, nonporous, hygienic countertop appropriate for actively used kitchens. The glass countertop manufacturing process will affect its heat resistance and durability against cracking from thermal shock if it is exposed to extreme temperature changes in a short time.

**Tempered glass** countertops come in a variety of textured finishes and thicknesses, ranging from 1½ to 4 inches. Colors and patterns can be included in the glass. Edge treatments can be polished, brushed, or textured. If the glass top is clear, a finished substrate must be below it. Wood, aluminum, or stainless steel can be used. Glass tops can also be back-painted as well as accented with LED lighting.

Several manufacturers offer counter surfacing materials manufactured with tempered glass, **post-consumer recycled glass**, and semiprecious man-made stones. Some companies make counter surfaces out of recycled glass bottles. These tops are very specialized and warrant careful review of the source manufacturing information, as well as job site preparation guidelines and installation recommendations. **PR**

*This article is excerpted from the NKBA Professional Resource Library volume: Kitchen & Bath Products and Materials, Second Edition by Ellen Cheever, CMKBD, ASID, CAPS to be published by John Wiley & Sons in November 2014. This material is reproduced with the permission of John Wiley & Sons.*