By Carol Lamkins, CMKBD, CID

People want their home to be an extension of self. This desire drives decisions for materials, colors, textures and patterns. Familiar textures and nature-inspired colors including earth tones and tints of white, ground and insulate against our fast-paced world of technology, global unrest and a changing political arena. There is also a growing social consciousness to choose products that are harmless or neutral versus detrimental to the environment. These factors also drive countertop decisions.

The countertop is one of the most used surfaces in the home. Therefore the material should be hard-wearing and low maintenance for today's busy homeowners. Most consumers want to minimize grout on horizontal surfaces. So let's examine some of the strengths and weaknesses of popular countertop choices and new options.

<u>Natural stone</u> has been gracing homes for decades and has become very affordable with today's C & C technologies. Understanding how the stone is classified gives you insight into the expectations of performance.

Stone falls into three general categories. **Igneous rock** such as granite, resulting from lava or magma, has been formed from extreme pressure and high temperatures. **Metamorphic rock** such soapstone, slate and marble, has been formed by earth pressure and exposed to heat along the way. **Sedimentary rock** such as limestone and sandstone, has been formed primarily by earth pressure and it preserves elements such as fossils that fall into the mixture through time.

**Granite** is the most popular countertop especially for kitchens. The colors and patterns are endless. Granite is resistance to heat up to temperatures of ±480 °F. However, cracking can be initiated from direct contact of localized heat such as from a hot pot. So it is best to use a trivet to protect the surface.



**Soapstone**, generally smooth and dark gray in color, is an exceptional choice for countertops, backsplashes and sinks with drainboards. Soapstone is inert - this means that acids and alkalis will not etch soapstone as they will other stone surfaces. Surface staining can be removed by scrubbing. Soapstone is also

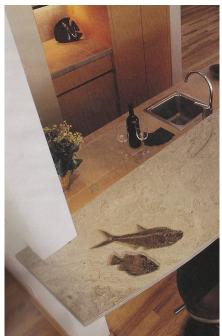
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impervious to temperature changes. However it may easily scratch, crack and darken over time.





Hardness and suitability vary among different types of **marble**. Marble is easily stained with liquids or oils and can be etched with prolonged contact of citrus products. A polished surface is more resistant to staining than a honed surface. Honed marble countertops may be scrubbed using abrasives, bleach and soap with a scouring pad and rinsed thoroughly.



Natural **sandstone** is an extremely hard and tough material. It is quartz-based, with each stone having a different level of porosity, hardness and compressive

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strength. Sandstone is known for capturing nature's impressions over millions of years. Fossils are among those impressions.

Because sandstone is more porous than other natural stones, it is more likely to stain and absorb moisture. It is also subject to etching from acidic foods. Proper maintenance with mild cleaners and sealing is critical to preserve its beauty.

Most stone countertops should be sealed or impregnated with a penetrating sealer. It is critical to verify approval for food contact when a sealant is used on a food preparation countertop. Keep in mind that once the stone countertop is sealed, the maintenance focuses upon the sealant versus the stone. Frequent buffing, stripping or reapplication may be needed since most topical sealers are typically softer than the stone itself and will scratch, mar and scuff very easily. Also avoid cutting and placing hot pots on the surface.









**Quartz surfacing** is stronger than granite using a minimum of 93% mined quartz (the gemstone of granite) with the balance in proprietary polymers. The patterns are controlled and consistent with uniform colors or veined to emulate movement. Unique designs and hues can be created from added materials such as mother of pearl, semi-precious stones, etc.

The homogeneous structure is non-porous, stain resistant and never needs sealing. This sanitary surface will not promote the growth of mold, mildew or bacteria if properly cleaned. Some manufacturers add antimicrobial protection into the formula. As with

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stone, quartz surfacing can scratch and chip and needs a trivet for hot pots. Most quartz surfaces are warranted.







<u>Solid surface</u> countertops are versatile with limitless design possibilities. The material works like wood and can be crafted and shaped in ways that are not possible with other materials. The seams are inconspicuous and solid surface bowls are integral. Some manufacturers are using at least 12% pre-consumer recycled materials and imperfect sheets may utilized as a regrind material to make specific colors (certified for its recycled content by the Scientific Certification Systems (SCS) which in turns qualified the product for LEEDS points).

Newer acrylic formulas allow light to refract differently on the surface, creating a surface that has visual depth and is less opaque.

Non-porous solid surface is hygienic meeting standards for NSF 51 Food Zone Compliance as does quartz surfacing. Some manufacturers offer anti-bacterial additives in their products.

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Even though solid surface is non-biodegradable, it can be re-cut and reinstalled or seamlessly reworked into new products. Surfaces can be periodically renewed through a minimally invasive sanding and buffing process. Like other countertops, solid surface should not be cut upon (also dulls knives) or receive hot pots without a trivet. Most manufacturers offer a 10-year or longer warranty.







New <u>laminate</u> countertops are still the most cost effective solution with unlimited colors, textures and patterns that can be successfully laminated to both fabrics and plastics. Many laminates are environmentally friendly using recycled plastics/laminates and avoiding urea formaldehyde in the manufacturing.

New techniques allow for undermounting sinks and lavs (no more Hootie rings!). Available options are high impact and water/chemical resistant laminates that work in

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moist environments. Use moisture resistant particle board core or solid wood builddown for dishwasher steam, intermittent water contact or high humidity areas.

Laminates are sanitary and will not support mold or bacteria growth. They should be cleaned with a soft, wet cloth and a little disinfectant or household cleanser; wipe with soft, dry cloth. Do not cut or place hot pots on surface as laminate is not repairable.





**Textured** 





Sandblasted and under lighted

<u>Glass</u> can be comparable to granite in strength, scratch resistance, heat resistance, durability and maintenance. Available in custom solid sheets, multi-dimensional patterns can be etched, sandblasted, grooved, melted, fused, or carved into glass. A full spectrum of colors available from light to bright with gloss or matte finishes. Backings can be opaque or the opacity of the applied pigment can be controlled when it

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is created for dramatic under lighting or backlighting. Glass edges are more vulnerable and need ½" to ¾" thickness. Though glass is usually not recommended for use as the primary work surface, it can be effectively used in tandem with other materials such as on a raised eating bar.

Light surface scratches can be serviced in place and polished out or reduced. But very deep scratches are a problem. As with other countertops, avoid cutting on or placing hot pots on surface. Dropping heavy or large items on the surface can cause breakage.









Cherry

Bamboo

<u>Wood</u> countertops equate nature-inspired warmth in popular tones such as red and medium to dark wood tones and distressed textures. Teak, the premium wood for use in wet areas; sustainable woods such as Black Walnut, several Maples, Red Oak, White Oak, Black Cherry and Basswood (Forest Stewardship Council certificated); and

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"Green" options such as Teragren Bamboo are leading the popular choices. Another more exotic sustainable option is Lyptus, a South American wood with a brown undertone appearance that darkens over time.

Look for wood with low-VOC sealants and water-based finishes. Sinks and lavs can be installed into countertop as long as wood is properly maintained. Wood countertops should be disinfected when cleaned. Maintenance requires applying mineral oil as the top dries out to keep liquids from penetrating. Wood is easy to repair as nicks and tiny dents are part of the natural patina.

<u>Metal</u> countertops are durable, heat resistant and provide natural antimicrobial properties. Radius edges, coves and backsplashes are easily integrated into the countertop. Custom manufacturing can results in a seamless countertop. Bending, welding, and polishing gives crisp detail. Metal countertops with the option of integral sinks and coved backsplashes can be fabricated in almost any size and configuration.

The downside is that metal is noisy, may dent and should not be cut upon. Surface scratching is common. It also conducts electricity and can emit static discharge.



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Textured stainless steel

**Stainless steel** is essentially a low carbon steel which contains chromium at 10% or more by weight which gives it its unique stainless, corrosion resisting properties. The chromium content of the steel allows the formation of a rough, adherent, invisible, corrosion-resisting chromium oxide film on the steel surface that is self-healing from chemical or mechanical damage.



**Zinc** is a reactive material and will show patina changes with age. The mirror finish shows through various scratches and dings.

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**Pewter** is a classic European countertop material that is used frequently on bar tops in France and Italy. It is noted for a satin sheen and distinctive color and continues to age or patinate and acquire a unique finish reflecting the use pattern. Pewter can scratch readily but is easy to re-brush the grain with a ScotchBrite pad unless it was fabricated with a mirror finish.



**Copper** is a precious metal that has been used for centuries to create useful products that often double as works of art. 16-gauge copper is recommended for countertops. Features include rolled edges with welded corners.

Copper is naturally self-renewing and an anti-microbial surface which requires no harsh chemicals for cleaning. Even after many decades of hard use, copper surfaces can easily be restored to their original luster.

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Composite and recycled materials have entered the market as eco-friendly solutions. Three categories are leading the charge.





**Recycled paper** countertops are durable and natural looking with an appearance similar to stone. Composed of 50% to 100% paper pulp from post-consumer recycled paper (some use shredded greenbacks) combined with resins, most of these surfaces use no synthetic or petroleum products. The composition provides natural antimicrobial properties and is homogeneous allowing for unlimited in edge details. The countertop is stain-resistant to most household cleaners and food, scratch-resistant and may be heat-resistant to 350 °F. The material is easily repairable and some have Forest Stewardship Council (FSC) certification.

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An example is 50% recycled tree fiber and paper and 50% bamboo that is VOC and petroleum free. This countertop material is UV stable and does not harbor bacteria. It works like wood, is easy to repair and can be sanded to remove scratches. Sealing is optional and recommended sealants are natural organic soy oil, palm oil and carnuba wax finish. Some companies offer a warranty.





Recycled glass countertops may use ground-up bottles and concrete held together with either cement or resin. Others use recycled glass and porcelain. Attributes can include strength, scratch resistance, thermal resistance and high durability. If not cleaned up right away, acids like red wine, lemon juice and vinegar can etch the matrix of the surface and foods such as coffee and tea can leave a stain. Some recycled glass countertops are certified by NSF International as a sanitary surface. Maintenance varies by manufacturer.



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**Recycled aluminum** countertops are beautiful and durable. They are available in standard sizes or in tiles. Multiple colors allow you to mix and match. Build-in features include front wrap, side wrap and backsplashes. Finishing processes smooth and polish the metal. Shown is an organic "River Rock" surface that gives the perception of weathered stone. This surface does not fingerprint like stainless steel. The tiles are lighter in weight than stone, heat resistant and always pleasantly at room temperature.



Countertops are the crowning touch on the cabinetry. They can take an average kitchen or bathroom and make it a "showcase". Keep in mind that countertop materials and design should blend into the style of the overall room. Mixing countertop materials in different areas of the room, such as stone and glass or quartz and stainless steel, can be very effective. The designer who has a clear grasp on the attributes and specific applications of various countertop materials will be most successful with these combinations. Creating signature edges that are unique in shape and style completes the design statement. The bottom line is that consumer wants it all, the "WOW" factor with performance of durable, easy-to-care for countertops.