

Amazing Countertops

Manufacturers have improved old materials and developed new ones, expanding the potential for new and remodeled kitchens

BY ROB YAGID

Deep into a kitchen-remodeling project, I'm still undecided about what type of countertops to install. Few elements of a kitchen draw as much attention—or as much money—so I'm considering my options carefully. Like most people, I want countertops that are going to withstand years of abuse but that will still look beautiful when I'm ready to sell sometime down the road. I'm not prepared to settle on just any countertop material, though, and going against popular opinion, I'm steadfast in my aversion to granite.

Don't get me wrong. Granite and other natural stones are great countertop materials. Slabs are available nearly everywhere, they're durable, and they look great. But it seems as if everyone is putting stone counters, especially granite, in their homes these days. Granite is so prevalent that it has become, to a degree, boring. What was once a material used to achieve a distinctive, high-end style has now become expected. Solid-surface material and engineered stone don't offer much more excitement. Instead, I'm considering countertop materials that few people know about and that even fewer are using in their homes.

If you're looking for a countertop that will make a dramatic style statement instead of helping to create a kitchen that feels common, consider products made of glass, paper, bamboo, or scrap metal. Besides being durable and beautiful, many of these products promote sustainable building practices by recycling unlikely materials. They might not be the most-popular products on the market or the most-classic ones, but that's a good thing.

Rob Yagid is an assistant editor. Photos by Krysta S. Doerfler, except where noted.



BAMBOO IS RENEWABLE AND DURABLE

It's hard not to be impressed by bamboo. The material is actually a type of grass, but it's 16% harder than maple. Bamboo reaches harvestable maturity in less than five years—as opposed to the 50- to 70-year growing period of hardwoods—and continuously replenishes itself by sprouting new shoots from an extensive root system. With its warm natural appearance, and its ability to be easily cut and shaped with common tools, it's no wonder bamboo is being made into kitchen countertops.

Strips of bamboo are assembled into counters in end-grain, edge-grain, or flat-grain orientations in dimensions as large as 30 in. wide, 96 in. long, and 2 in. thick, though custom sizes are available. Bamboo can withstand a significant amount of abuse, but should be treated like any wood counter. Trivets prevent burns

from hot pots and pans, and an application of penetrating sealer helps to prevent staining. Water-based polyurethane sealers tend to leave bamboo looking dull, so manufacturers recommend the use of food-safe tung oil to seal all faces of the countertop, including the bottom.

Like wood, bamboo countertops are only marginally stable. Dimensional changes occur with seasonal fluctuations in temperature and humidity. Unlike wood, bamboo shouldn't be stained because achieving an even appearance is often difficult.

A major benefit of using a bamboo countertop is that the entire length of its surface can be used as a cutting board. Any scratches or knife marks can be left or sanded away. A yearly application of proper tung oil will help to keep the countertop looking new.



Sources

Totally Bamboo: www.totallybamboo.com
EnduraWood: www.endurawood.com
Bamboo Revolution: www.bamboorevolution.com
Smith & Fong: www.plyboo.com

Price: \$20 to \$35 per sq. ft.

Note: Costs reflect materials only.

Not your ordinary butcher block. End-grain bamboo countertops conjure up images of traditional maple butcher block. End-grain bamboo, often referred to as parquetry, is significantly harder than maple, making it a more-durable cutting surface.

Tones and textures can vary. Edge-grain bamboo counters (above) tend to be slightly more monochromatic, while other grain orientations offer more visual texture. The darker color of bamboo is achieved by heating the material, which caramelizes its natural sugars.

PAPER COUNTERS LOOK AND FEEL LIKE STONE

Paper might not seem like a suitable raw material for countertop fabrication, but when saturated with resin, heated, and compressed, the result is surprisingly stonelike. This type of paper-based panel is durable and has been used for years in industrial and marine applications, while also being the surface of choice for skateboard parks. Several manufacturers make these counters, but different processes result in varying performance traits.

Panels made of post-consumer waste paper are typically sought for their green attributes. This recycled paper is less uniform than virgin material, however, and can result in a countertop that varies in thickness, which can lead to installation difficulties—especially at butt joints. Virgin material, though less green, allows for tighter tolerances during fabrication.

The type of resin used to bind paper together also has an impact on the



countertop. Phenolic resin, though extremely strong, is caramel in color, which limits the range of color choices. Also, UV-exposure causes phenolic resins to darken over time.

Klip Biotechnologies LLC recently launched its paper-based countertop, EcoTop, which is made with a different type of manufacturing process. Joel Klippert, the creator of EcoTop, describes the material as “a blend of bamboo fibers, which add dimensional stability to the counter; recycled demolition wood fibers; and recycled paper.”

These materials are bound together with a VOC-free water-based resin.

The resin won't darken due to UV-exposure and is clear, which enables Klip Biotechnologies to make counters from

Easily tooled, not easily damaged. Paper countertops can be cut or routed to have crisp, defined edge profiles. However, manufacturers suggest that paper counters be finished with eased edges because the material can be sharp. Cutting and shaping ease are by no means a reflection of this countertop's surprisingly strong durability.

white to black and many colors in between. Unlike other paper-based counters, EcoTop does not need to be installed by a certified technician.

All paper-based countertops can be cut and shaped with carbide-tipped blades and router bits, just like solid-surface material. Panels are available in sizes as large as 5 ft. wide, 12 ft. long, and 1¼ in. thick, depending on the manufacturer. These countertops are stain resistant, but should still be properly finished. Some manufacturers provide their own finish product, which is a combination of natural oils and waxes that enrich the appearance of the top while protecting it from damage.

Damage that does occur, such as scratches and scorch marks, can be sanded out of the top. However, it's difficult to do without creating a blemish, so refinishing the entire top is recommended. A yearly application of mineral oil or an approved finish will help keep this top looking new.

Sources

Paperstone: www.paperstoneproducts.com

Shetkastone: www.shetkastone.com

Richlite: www.richlite.com

EcoTop: www.kliptech.com

Price: \$35 to \$90 per sq. ft.

Note: Costs reflect materials only.



SOLID GLASS IS MODERN AND EASY TO CLEAN

Glass countertops bring a clean, modern look to a kitchen. Contrary to popular perception, they are durable and are extremely sanitary because glass is nonporous and easy to clean. Glass countertops can be installed in a variety of ways with edge treatments that range from polished to chiseled in appearance.

A glass top being fixed directly to a cabinet typically receives a coat of paint on its bottom surface prior to being secured with silicone caulk. The paint helps to hide the contents of the cabinet and gives the counter a finished look. Glass can also be installed over an opaque substrate like melamine or suspended on piers so that it appears to be floating. Stainless-steel locating pins can also be used to keep these countertops in place.

Fabricators use three types of glass to create countertops. Float glass, the material found in modern-day windowpanes, can be used to make counters as large as roughly 6 ft. wide, 10 ft. long, and $\frac{3}{4}$ in. thick. Manufacturers often temper this glass to improve its strength and safety in the unlikely event that it breaks.

Slump glass is distinguished by its shapes and textures. Slump glass is simply float glass that is placed on top of a carved mold, then heated so that the glass relaxes and "slumps" into the contours of the mold.

Kiln-fired glass, also known as cast glass or art glass, is made of recycled glass fragments that have been placed in a kiln and heated until they bond back together. Kiln-fired glass is as strong as the other types of glass, if not stronger. Thick glass countertops are most often made of kiln-fired glass, which can be



more than 2 in. thick. Kiln-fired tops can be made only as large as the kiln that fabricators have access to, typically 6 ft. wide by 12 ft. long.

Glass-countertop fabricators are split in their recommendations for where their products

can or should be used. "Glass counters shouldn't be used anywhere they'll receive a significant amount of abuse," says Jim Duncan of Duncan Glass. Along with some other manufacturers, Duncan thinks that glass tops should be reserved for non-utility areas in the kitchen, such as accent pieces or island tops. Others say that glass performs like natural

stone and can be used safely as a worksurface. Fabricators agree on one point, however: Glass scratches. Although scratches and fingerprints are less noticeable on a textured or colored top, repair or replacement of a glass counter can be expensive.

Glass tops have few maintenance requirements. Just clean them with a nonabrasive product like Windex.

Sources

Ultraglas: www.ultraglas.com

ThinkGlass: www.thinkglass.com

Duncan Glass: www.duncanglass.com

Smoke and Mirrors: www.smokeandmirrorsllc.com

Brooks Custom: www.brookscustom.com

Price: \$65 to \$300 per sq. ft.

Note: Costs reflect materials only.

Beauty meets function, at a cost. Manufacturers can form glass into nearly any shape, texture, and color. This allows their tops to have great visual appeal while masking fingerprints and scratches. Similar to most other art, the more elaborate the piece (left), the higher the price tag.



Making concrete counters is easier than ever

Because they are crafted by hand, no two concrete countertops are ever exactly alike, resulting in a top that evokes a true artisanal feel. While the number of concrete-countertop specialists has continued to grow, so too have the resources for first-time fabricators.

Manufacturers like Cheng Design and Buddy Rhodes now provide all the materials needed to design and fabricate

concrete countertops. They sell specially blended concrete mixes, pigments, sealers, and sink molds. Instructional videos and books are also available. They even host instructional workshops around the country.

If you've been having trouble finding a durable countertop that has true custom appeal, there has never been a better time to build it yourself.



Sources **Buddy Rhodes:** www.buddyrhodes.com • **Cheng Design:** www.chengdesign.com

To locate other fabricators and suppliers: **Concrete Network:** www.concretenetwork.com

RECYCLED-GLASS COUNTERTOPS ARE NOW EASIER TO FIND

Although countertops made of cement and recycled glass have been around for more than a decade, production has been low, and manufacturers have been scarce. These days, more and more companies are salvaging glass fragments, which are available in countless colors and shapes, and mixing them with cement or epoxy resin to make countertops. Recycled glass is a major component of each mix, making up roughly 75% to 85% of the finished countertop, depending on the manufacturer.

Fabricators shape and install these countertops like natural stone, with a similar selection of edge profiles. Sizes as large as 9 ft. by 5 ft. are available.

Leaving a hot pot on the surface won't result in burn marks on a recycled-glass countertop, but it could affect the top's sealer. For this reason, trivets are recommended.

Recycled-glass counters constructed with a cement binder are slightly different than those made with epoxy resin. Cement can be stained by acids in wine, vinegar, and citrus juices, so these countertops need to be sealed, maintained, and cleaned of spills with more diligence than counters made with resin. Resin, however, is not as hard as a cement-based surface and always requires the use of trivets and cutting boards.

Most cement counters come sealed but require resealing every couple of years with an impregnating sealer. Resin-based counters don't need sealing but should be polished with a paste wax to maintain their finish.

Sources

Vetrazzo: www.vetrazzo.com

IceStone: www.icestone.biz

Tiger Mountain Innovations: www.trinityglassproducts.com

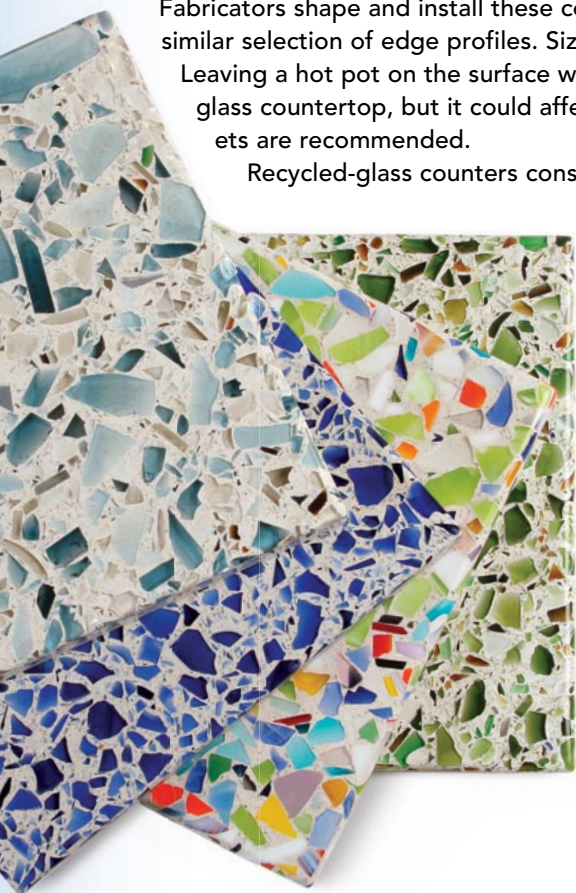
EnviroGLAS: www.enviroglasproducts.com

Price: \$40 to \$90 per sq. ft.

Note: Costs reflect materials only.



From the curb to the kitchen. When bottles and windows are broken, windshields fractured, and traffic lights decommissioned, some of this glass is recycled, and a lot of it ends up in the landfill. More and more of it, however, is being used to make unique, durable countertops.



Uniform edges are more convincing. By eliminating the seam at a laminate top's edges, manufacturers like VT Industries can create counters (photo above) that are more-easily passed off as solid-slab material.

Laminate
never looked
so good

Created in 1914 for use as an electric insulator, plastic laminate has long proven itself as a highly durable material. It wasn't until many years after its creation, though, that people realized it would make an excellent countertop surface. Laminate is nonporous, stain resistant, and warm to the touch. It also absorbs impact (which leads to fewer broken glasses) and requires little maintenance. When laminate is bypassed as a countertop material, it's often because of a style threshold

defined by shiny surfaces and poor imitations of stone and wood.

Modern laminates, though, are better than they have ever been, thanks to higher-quality decorative layers, newly developed textured surfaces, and refined edge details that eliminate the telltale seam that marks laminate transitions. Just about anyone with basic carpentry skills can fabricate laminate counters, and with today's products, they can create countertops that look anything but plastic.

Sources **WilsonArt:** www.wilsonart.com • **Formica:** www.formica.com
Pionite: www.pionite.com • **VT Industries:** www.vtindustries.com

SCRAP-METAL COUNTERTOPS SAVE RESOURCES

As the green-building trend continues to grow, products made from recycled materials are becoming more popular. Of the nearly 3 million tons of aluminum that are discarded every year in the United States, a small portion is being used to create countertops that can set your kitchen apart.

Available through dealers and fabricators nationwide, Alkemi countertops are made by mixing aluminum shavings with UV-stable polymeric resin. The countertop material contains at least 60% post-industrial scrap aluminum, which conventional recyclers don't use. Installed over a plywood substrate with silicone caulk, these counters are easily worked by carbide-tipped tools and are maintained like ordinary solid-surface materials.

Eleek Inc. of Portland, Ore., fabricates solid 1/4-in.-thick countertops and tiles made of recycled aluminum that has been cast in reusable silicone molds. The products are an environmentally friendly alternative to metal countertops such as stainless steel, zinc, and pewter, and still have an easy-to-maintain, industrial aesthetic. Each countertop is custom-built and available with an integrated rolled front edge and backsplash, so further on-site fabrication is not needed. Eleek's countertops and tiles are installed with mastic when placed over cement board or construction adhesive when applied to a plywood substrate. Eleek's products come with one caveat. They can't be cut on site without compromising the powder-coated finish. This places a much larger emphasis on precise templating and layouts prior to ordering.



Polished or honed, but always made with aluminum. Alkemi uses only aluminum shavings in its countertops. The variety of colored shavings, like bronze or copper, is acquired by anodizing the shavings prior to mixing them with resin. Alkemi tops are available with either a smooth, honed surface (top) or a textured surface (bottom).



Artistic finishes help to create natural surfaces. Eleek countertops and tiles can be powder-coated in a variety of colors or given a natural-looking patina by an in-house artisan. Their patina finishes help to convey truly custom work, and no two products look exactly the same.



Sources

Alkemi: www.renewedmaterials.com

Eleek Inc.: www.eleekinc.com

Price: \$70 to \$150 per sq. ft. (countertops); \$8 to \$50 each (tiles)

Note: Costs reflect materials only.

FineHomebuilding.com

Visit the Magazine Extras section of our Web site to see a video tour of IceStone's manufacturing facility. Along the way, learn how IceStone combines recycled glass and concrete to make countertops.