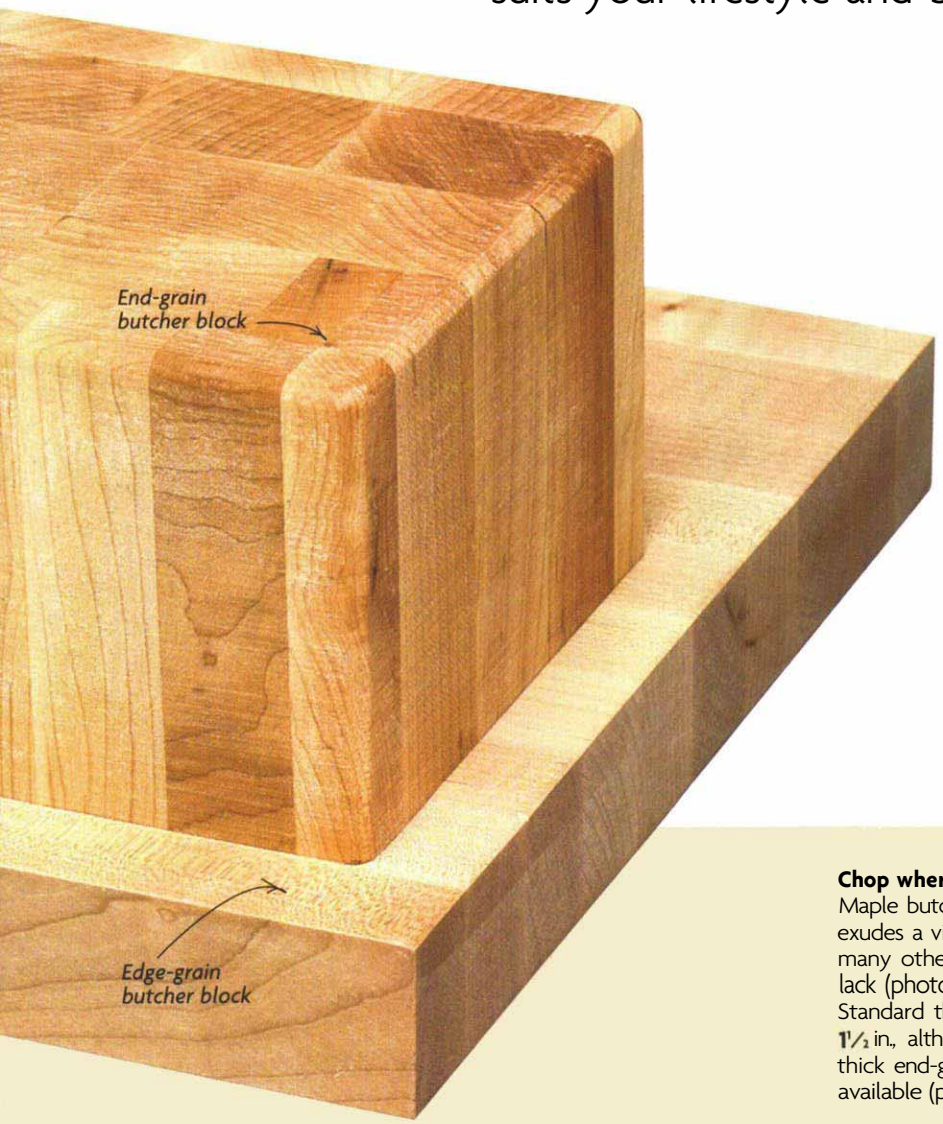
Choosing Kitchen Countertops

The perfect marriage of cost, aesthetics and performance is what suits your lifestyle and budget best



Chop where you like. Maple butcher block exudes a visual warmth many other materials lack (photo right). Standard thickness is 1½ in., although 4-in. thick end-grain block is available (photo left).

BY SCOTT GIBSON

Yearning for the good old days? Take a close look at an old kitchen. Even well-appointed houses were likely to have kitchens that look utilitarian, even stark, when compared with what contemporary cooks expect. Counter space often was provided by a built-in cabinet or dresser with a wood top, or even just a big table. Not these days. We want countertops that delight the eye, stand up to heat, keep out food stains, are easy to clean and are more durable than the deck of a battleship.

Amazingly, a variety of materials, both natural and man-made, manages to fit the bill: plastic resins, sheet metal, wood, stone, ceramic tile, concrete, even slabs of quarried French lava. Prices range from less than $5 per sq. ft. for plastic-laminate countertops to

BUTCHER BLOCK:

Built-in cutting boards

Butcher block is one of the few totally natural kitchen-countertop materials. Typically made from strips of hard maple, 1½-in. thick butcher-block counters are glued up to expose wear-resistant edge grain. They can be ordered in sizes up to 12 ft. long and 4 ft. wide for about $30 to $35 per sq. ft. Butcher block can be ordered through local lumberyards and home centers as well as a few large manufacturers. One of them, John Boos & Company, also makes end-grain tops 4 in. thick in sizes up to 60 in. by 38 in. for about $85 per sq. ft.

Among its advantages as a countertop material: It's easy to work and install, has a visual warmth and pleasing resilience, and can be used as a cutting board. Scratches, scorch marks and other signs of wear and tear can be counted as character, or scraped and sanded away. One drawback is that wood is susceptible to water damage, so butcher block used around the sink should be carefully sealed.



Bottom photo: Andy Engel

$300 per sq. ft. for granite as rare as blue Brazilian bahai.

In addition to their many practical contributions, countertops also make a big visual and tactile impact. The huge variety of materials—each with its own range of characteristics and cost—allows a kitchen countertop to fit neatly into just about any lifestyle and architectural tradition. Spending thousands of dollars isn't hard to do, but far more economical alternatives also exist. The only trick is wading through all the options. □

Scott Gibson is a free-lance writer. Cost estimates are gathered from manufacturers, retailers and installers as well as *Repair & Remodeling Cost Data* by RSMeans. Prices vary by region. Photos by Scott Phillips, except where noted,

PROS: Resilient, easy to work, relatively durable, can be used as cutting board, surface can be repaired.

CONS: Will scorch, not as easy to keep clean as some other materials, can stain if unsealed, susceptible to moisture damage around sinks.

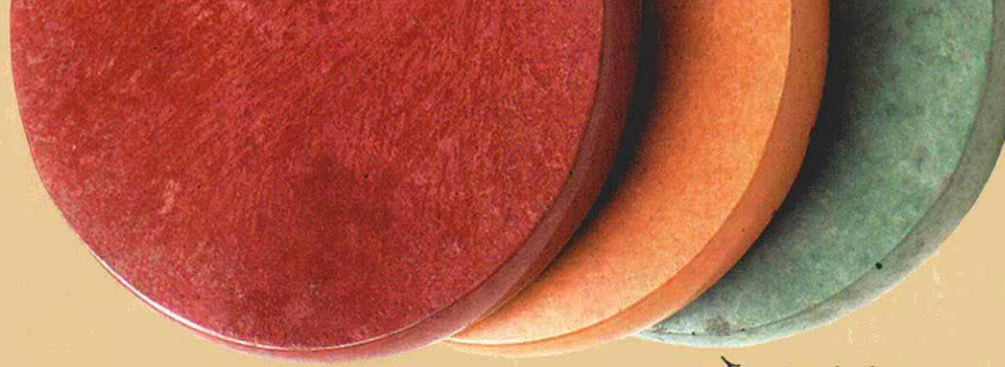
COST: $30 to $85 per sq. ft, uninstalled (shipping, if applicable, extra).

BUTCHER-BLOCK SOURCES

John Boos & Co.
(217) 347-7701
www.johnboos.com

The Hartwood Lumber Co.
(800) 798-1269
www.hardwood-lumber.com

Bottom photo: Charles Miller



Samples from Cheng Design

CONCRETE:

High style, potentially high maintenance

From a design perspective, few countertop materials are as malleable as concrete. Cast upside down in molds or formed in place, concrete counters can be made in virtually any shape and thickness. Made correctly, they are hard, durable, and heat- and scratch-resistant. But cast without proper reinforcement and the correct mix of materials, concrete counters have been known to develop severe cracks as they cure. Even the best of them will stain if not assiduously maintained.

"Sidewalk contractors who do kitchen countertops may be part of the PR problem," says Jeffrey Girard of FormWorks in Raleigh, North Carolina. Counter fabricators such as Girard often cast standard countertops 1½ in. to 2 in. thick, using structural steel and polypropylene fibers to minimize cracking.

Fabricators exert considerable control over the look of the finished product. Girard, for instance, adds pieces of glass and metal to the mix, then grinds the surface to create beautiful, multicolored patterns (photo right). The work of concrete pioneers like Fu Tung Cheng (photos above) and Buddy Rhodes (photos below right) further reveal concretes versatility.

Concrete's Achilles' heel as a countertop is that it stains easily. "The bottom line is that your concrete counter is going to end up staining no matter what you do," says Eric Olsen, a Berkeley, California, writer who collaborated with Cheng on a book on the topic. "That's part of its charm."

PROS: Versatile, heat resistant, durable, colors and textures easily customized.

CONS: Can stain.

COST: $60 to $75 per sq. ft. for prefabricated countertops (shipping and installation extra).

CONCRETE SOURCES

Cheng Design
(510) 849-3272
www.chengdesign.com

FormWorks
(919)434-5339
www.formworks-nc.com

Buddy Rhodes Studio Inc.
(877)706-5303
www.buddyrhodes.com

Glass and steel fragments decorate this sample from FormWorks.



Marbleized patterns are typical in the work of Buddy Rhodes.



Site-cast counters are another alternative. Oregon builder Thomas Hughes cast this counter upside down in his client's garage from garden-variety portland cement and aggregates.



Hard-wearing and stain resistant. Ceramic tile, available in hundreds of colors and patterns, offers great design flexibility at a relatively low cost. But watch for grout stains.



TILE:

Design flexibility, durability, low cost

As a countertop material, ceramic tile offers nearly as much design flexibility as concrete. Tile is available in a huge variety of colors, patterns, textures, sizes and prices, from mass-produced 4-in. sq. field tile to hand-painted works of art Installed prices start at about $15 per sq. ft. for a basic counter and go up from there. Loose field tile starts at less than $2 per sq. ft

Glazed ceramic and porcelain tiles have a glasslike outer layer that makes them long-wearing, highly heat resistant and nonabsorbent. Tile can be set on a mortar bed or over cement backerboard with thinset mortar. Because it is easy to cut, tile can be formed into counters of just about any shape and size. Damaged tiles can be chiseled out of a counter and replaced.

The downside? For one, tile is really hard. Fragile wine glasses and thin china won't fare well in careless households. You'll need cutting boards on tile surfaces, and because tile counters are made of many pieces, the surface is unlikely to be perfectly flat. Tile's major shortcoming is the grout between the tile. Left untreated, cement-based grout stains easily, and it can be hard to keep clean.

Epoxy grout is one solution. It's good at resisting stains. But epoxy grout yellows with time, especially when exposed to sunlight. Cement-based grout can be sealed to provide some protection. The National Tile Contractors Association says a water-based acrylic sealer (such as Aqua Mix, see below) is less likely than solvent-based sealers to be eroded by household degreasers and cleaners. The bottom line: The smaller the grout joint, the less maintenance you have.

PROS: Versatile, inexpensive, heat resistant, durable, high stain resistance.

CONS: Grout may stain, surface not perfectly flat.

COST: Materials, including substrate, adhesive and border tile, from $7 and up per sq. ft. installation adds $8 to $10 per sq. ft.

TILE AND INSTALLATION SOURCES

National Tile Contractors Association
(601) 939-2071
www.tile-assn.com

Tile Council of America
(864)646-8453
www.tileusa.com

Aqua Mix
(800) 366-6877
www.aquamix.com

For a list of tile manufacturers and distributors
www.infotile.com

Bottom photo: Roe A. Osborn

SOLID SURFACING:

A 35-year-old Wunderkind in the kitchen

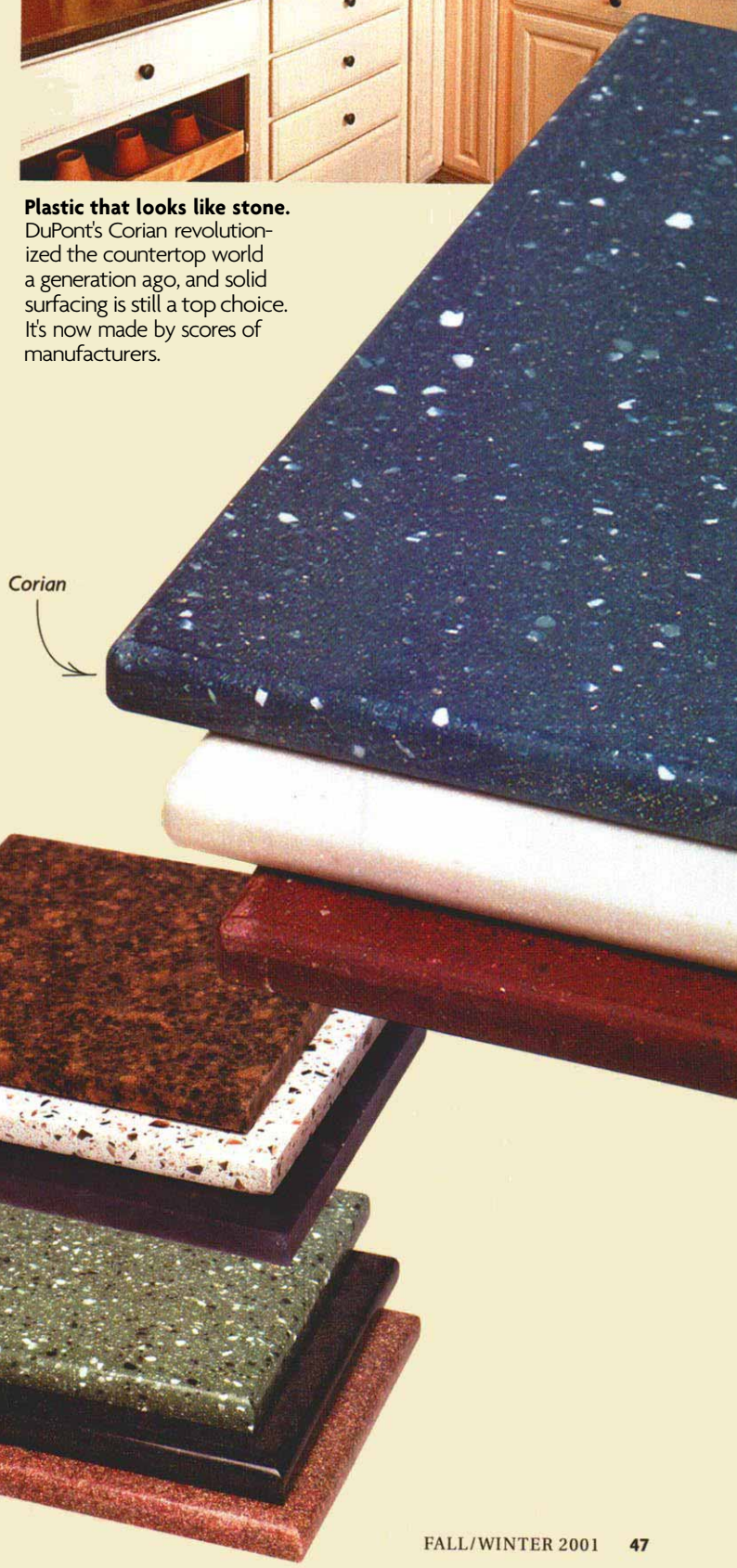
Few products have had more influence in kitchen design in the past 35 years than DuPont's Corian. What was then the worlds first solid-surface countertop material now has many rivals. Avonite, Gibraltar, Surell, Pionite, Swanstone and Fountainhead all are brand names for essentially the same stuff: polyester or acrylic resin plus a mineral filler called ATH, or aluminum trihydrate. Solid surfacing comes in plain colors, patterns that resemble stone and, more recently, translucent versions that are glasslike in appearance.

Regardless of brand, solid surfacing has a long list of attributes that make it a nearly ideal countertop material. Solid surfacing is the same material all the way through. Minor surface blemishes—a scorch mark, for example—can be sanded out. It's nonporous, so it's easy to keep clean. And it's highly stain resistant. Solid surfacing can be fashioned into a sink and then glued to the countertop for a seamless, leakproof installation without any crevices or edges to catch and hold food and debris. It can be worked with regular woodworking tools, and solid surfacing comes with a long guarantee, usually ten years. It's typically sold only to certified fabricators who have taken a manufacturers training course.

Countertops are most often formed from ½-in. thick sheets. Edges are formed by building up layers of identical or contrasting material and milling the profile with a router. Sheets 30 in. and 36 in. wide run to 12 ft. in length. Solid surfacing is expensive—roughly $50 to $100 per sq. ft.—and it's a plastic, so not as appealing to some homeowners.



Plastic that looks like stone. DuPont's Corian revolutionized the countertop world a generation ago, and solid surfacing is still a top choice. It's now made by scores of manufacturers.



PROS: Nonporous and nonstaining, easy to clean, repairable, durable, wide range of colors and patterns available, integral sinks possible.

CONS: High cost, should be protected from high heat, sharp knives.

COST: Typically installed by certified fabricator, $50 to $100 per sq. ft.

HIGH-PRESSURE LAMINATE / SOLID-SURFACE SOURCES

Avonite
(800) 428-6648
www.avonite.com

Corian
(800) 426-7426
www.corian.com

Gibraltar
(800) 433-3222
www.wilsonart.com

Pionite
(800) 746-6483
www.pionitesolid.com

Surell, Fountainhead
(800) 367-6422
www.formica.com

Swanstone
(800) 325-7008
www.theswancorp.com

Top photo: Courtesy of DuPont



SLAB STONE:
Durable, heat resistant and popular

Slab stone, especially granite, is cold to the touch, heavy, hard to work and expensive. It's also so popular, says former stone-restoration contractor Fred Hueston, that it's now going into spec houses selling for $100,000. "It's the big one now," says Hueston, owner of the National Training Center for Stone and Masonry Trades in Longwood, Florida. Granite comes from all over the world, in a variety of colors and patterns. Prices show big regional differences, starting at $40 to $50 per sq. ft. (possibly lower in some areas) and commonly running to $80 to $100 per sq. ft installed.

Sold in two thicknesses (¾ in. and 1¼ in.), granite is resistant to heat and scratches. Most countertop material is polished, but it also is available in a honed (matte) finish, usually for a little more money. Slab size is usually limited to 10 ft. in length, 5 ft. in width.

Although resistant to acidic foods such as lemon juice, Hueston says, granite will stain. It's especially susceptible to oil. Penetrating sealers, commonly called impregnators, can keep out oil and water. Hueston prefers sealers containing fluoropolymers (the same chemical used to make Scotchgard).

Other stone options include slate and soapstone. Both come in smaller slab sizes than granite (roughly 6 ft. long and between 30 in. and 40 in. wide) and in not nearly the variety of colors. Prices of these two types of stone are similar, $65 to $80 per sq. ft., not including installation or shipping.

Blue gray and lightly variegated when newly installed, soapstone oxidizes and darkens with time to a rich charcoal. It is extremely dense, with better stain resistance than granite. But soapstone is also soft. Soapstone is usually treated with mineral oil. Scratches in soapstone can be sanded out.

Slate runs in a wider but still limited color palette: blacks, greens, reds, grays and muted purples. Like soapstone, slate is relatively soft, although scratch marks can be buffed out with fine steel wool, says Daphne Markcrow of Vermont Structural Slate Company in Fair Haven, Vermont. Vermont slate needs no sealers, she says, and no maintenance, although slate mined in different regions may be more absorptive. Hueston says slate, which is formed in layers, will occasionally delaminate.

PROS: Wide variety of colors and textures, heat resistant, very durable (stain and scratch resistances vary).

CONS: High cost, some types may stain, slab size may be limited. Can delaminate.

COST: $50 to $100+ per sq. ft. fabricated and installed.

SLAB-STONE SOURCES

Freshwater Stone + Brickwork
(207) 469-6331
www.freshwaterstone.com

Vermont Structural Slate Co.
(800) 343-1900
www.vermontstructuralslate.com

Vermont Soapstone Co.
(800) 284-5404
www.vermontsoapstone.com



Pricey but in high demand. Natural stone is the current favorite of high-end countertop choices. It offers high heat resistance and durability and a wide variety of colors and textures, such as this red-slate bar top with a honed finish (photo right).



Restaurants like it. Stainless steel, long a fixture in commercial kitchens, is making gains in residential kitchens for the same reasons: long life and low maintenance.

STAINLESS STEEL:
The pros like it for a reason

Once found only in commercial kitchens, stainless-steel counters are gaining ground at home, too. Boston architect Ann Finnerty chose a combination of stainless steel and maple butcher block when she redid her own kitchen four years ago. "I wanted a material that was common and not too precious and not too expensive," she says. Working with a local fabricator, Finnerty chose stainless steel with a plain edge and no backsplash. Finnerty likes the fact that stainless steel is easy to clean.

"When it's new especially, fingerprints show up like crazy," Finnerty says. That problem fades as the surface gets more wear and develops a patina.

Like stone and concrete countertops, stainless steel can't easily be modified on site. Countertops are usually fabricated from templates, often in 16-ga. material. Sheet metal is glued to a substrate of medium-density fiberboard. Sinks can be welded in.

Expect to pay $60 to $80 per sq. ft. But edge details, sinks and overall complexity can change prices dramatically. Mark Ponder, an estimator at Weiss Sheet Metal, which made Finnerty's counters, cautions that generalized prices can be misleading. A plain 10-ft. long counter with a simple sink and a 4-in. backsplash might cost $1,200, he said—a price that does not include the substrate, shipping or installation. Linda Bergling of The Stainless Steel Kitchen, a large Midwestern fabricator, says her shop charges about $160 per running foot of counter with backsplash. But the stainless is already laid up on a substrate and ready to go in.

Counters are typically made from 304 stainless with a #4 brushed finish, the same stuff used in restaurants and commercial kitchens. Length is usually limited to 10 ft, widths to 4 ft, although larger sheets can be ordered. Stainless can be cleaned with a mild detergent or baking soda or vinegar diluted in water, Bergling says, but bleach should be avoided. Some foods—including mustard, mayonnaise, lemon juice and tomato ketchup—that sit on the counter may cause a white surface discoloration that can be rubbed out with a fine Scotch-Brite pad.

Counters also can be fashioned from copper, zinc and nickel. But prices are usually higher, and these metals require more maintenance.

PROS: Nonporous and nonstaining, resistant to heat, durable, easy to clean.

CONS: Can dent.

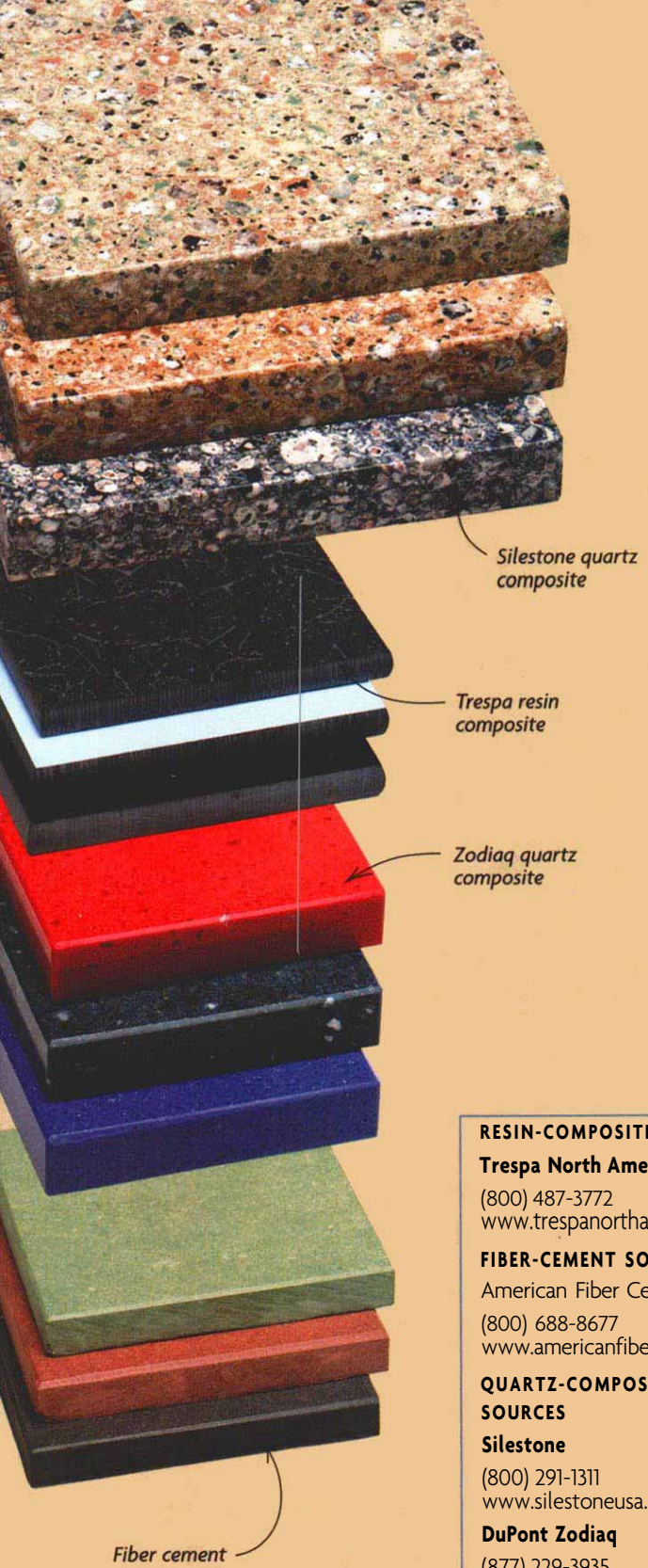
COST: $45 to $65 per sq. ft for uninstalled straight runs; $80 to $90 installed.

STAINLESS STEEL

The Stainless Steel Kitchen
(800) 275-1250
www.staintesssteelkitchen.com

GMS
(800) 787-3247

Bottom photo facing page: Vermont Structural Slate Co. Photo top left this page: Claudio Santini.



COMPOSITE MATERIALS, LAVA AND FIBER CEMENT:

The new and the exotic

Although many countertop materials are familiar, a variety of newer, man-made materials also is available.

Silestone is a composite of 93% quartz, resin binders and pigments. It is made in Spain and sold in the United States through a network of distributors. A similar material is made by DuPont under the Zodiaq brand name. Prices vary by region and by the color of the material, but Silestone says that installed prices are between $45 and $70 per sq. ft. It is nonporous and never needs to be sealed, the company says, and it's more resistant to food stains than the natural stone it closely resembles. Silestone is available in 35 colors and three thicknesses—$\frac{7}{16}$ in., $\frac{13}{16}$ in. and $1\frac{1}{8}$ in.

Trespa is a Netherlands-based company that makes three types of composite architectural panels. Two of them—TopLab and Athlon—are potential kitchen countertops. Athlon is essentially super-thick high-pressure laminate. It's made from phenolic resins reinforced with cellulose fiber and manufactured under high pressure and temperature. Its top decorative layer is melamine-impregnated paper, and it is available with either a smooth or slightly textured finish. Standard sheet sizes go up to 6 ft by 12 ft, with thicknesses ranging from $\frac{1}{4}$ in. to 1 in. One thing that makes Athlon attractive is its price: In a $\frac{1}{2}$-in. thickness, Athlon is less than $7 per sq. ft. It can be worked with standard carbide tools, and it doesn't need seating. TopLab is usually used in laboratory settings because of its resistance to chemicals, scratches and stains. Prices are slightly higher. Pionite (p. 47, sources) makes a similar material called thick phenolic-core laminate.

In the market for something truly unusual? How about French lava with a kiln-fired enamel coating that the manufacturer says is impervi-

RESIN-COMPOSITE SOURCES

Trespa North America Ltd.
(800) 487-3772
www.trespanorthamerica.com

FIBER-CEMENT SOURCES

American Fiber Cement Corp.
(800) 688-8677
www.americanfibercement.com

QUARTZ-COMPOSITE SOURCES

Silestone
(800) 291-1311
www.silestoneusa.com

DuPont Zodiaq
(877) 229-3935
www.zodiaq.com

KILN-FIRED LAVA SOURCES

Pyrolave
(919) 788-8953
www.pyrolave.com

QUARTZ COMPOSITES

PROS: Nonporous and nonstaining, scratch and heat resistant, durable.
CONS: Relatively high cost.
COST: $45 to $75+ per sq. ft. installed.

RESIN COMPOSITES

PROS: Scratch and stain resistant, low cost.
CONS: Limited color choice, damaged by heat,
COST: $7 to $10 per sq. ft.

FIBER CEMENT

PROS: Relatively low cost, heat resistant, durable, high strength.
CONS: Can stain (requires periodic resealing), limited color selection.
COST: $30 to $70 per sq. ft. uninstalled (shipping extra).

LAVA

PROS: Hard, stain resistant, heatproof.
CONS: Extremely high cost, limited availability.
COST: $220 to $350 per sq. ft. (installed).

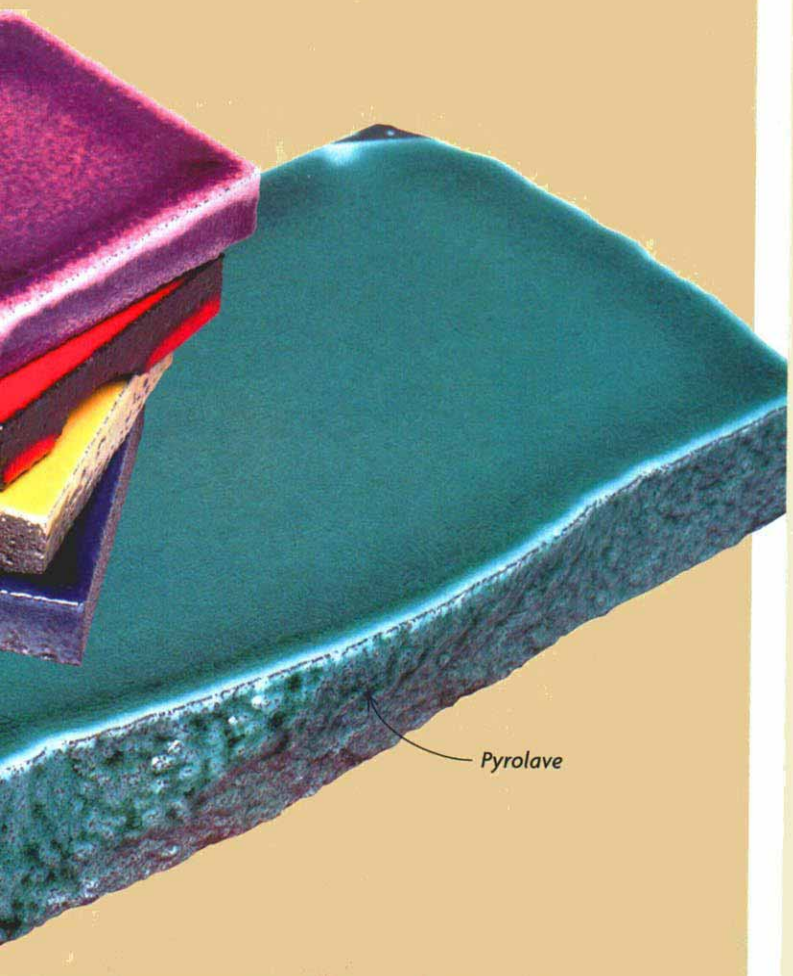




Ooh la la! Ancient French lava from Pyrolave [above and below) is an expensive and alluring countertop choice. Other non-standard choices (facing page) are quartz composites, resin composites and fiber cement. Photo courtesy of Pyrolave.

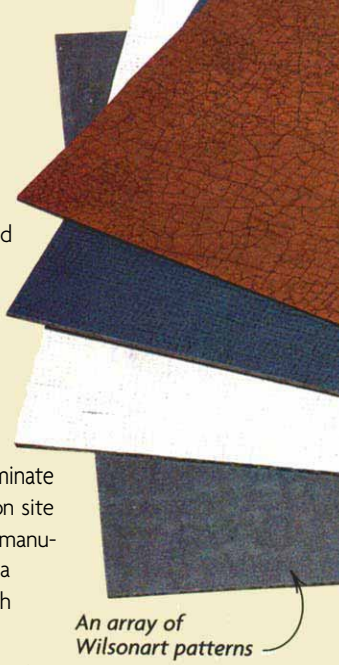
ous to stains and heat? Pyrolave comes in sheets up to 4 ft. by 8 ft., in two thicknesses—1¼ in. and 1½ in. Custom colors are available in addition to the 30 stock colors the company offers. Installed prices range from $220 to $350 per sq. ft.

Fiber-cement countertops—sold under the SlateScape, Fireslate2 and Colorlith brand names—are manufactured in Germany, imported to the United States and sold through authorized fabricators. Fiber cement has the bulk of quarried stone, but it can be less expensive: $30 to $40 per sq. ft. in 1¼-in. thickness. Fiber cement is currently available in four colors and five thicknesses. It has good resistance to heat and has high compressive strength. Like other cement-based products, this material stains easily unless it is sealed properly—and that takes regular maintenance. The company suggests pure tung oil two or three times a year to augment the penetrating sealer applied by the fabricator.



PLASTIC LAMINATE

Old standby still rules



An array of Wilsonart patterns

High-pressure laminate is the family minivan of the countertop world: It's practical and economical, and you'll never brag you own it. Still, laminate is the choice in as many as three-quarters of all new kitchens in the United States. Standard high-pressure laminate, roughly 1/16 in. thick, is a sandwich of kraft paper impregnated with phenolic resin and topped by a decorative layer of melamine-protected paper. In sheet form, laminate is glued to a particleboard substrate, either on site or in a fabricator's shop. A thinner version is manufactured into a ready-made countertop with a rounded front edge and an integral backsplash called a post-formed counter.

Laminate is available in dozens of colors and patterns for $2 or less per sq. ft. in sheets up to 12 ft. long and 5 ft. wide. Post-formed counters, ready to drop into place, may be $5 or less per sq. ft. at big home centers. There are fewer colors to choose from, and post-formed counters are for straight runs only; curvaceous kitchen designs won't work.

Most kitchen countertops are made of general-purpose laminate, but laminate is also available in high-wear, extra-thick and fire-retardant versions. In addition to its low cost, laminate has many other attributes. Hard and durable, laminate is highly stain resistant and stands up well to everyday use. However, heat and sharp knives damage the surface, and any water getting into seams may degrade the substrate.

A variety of new edge treatments has eliminated one of laminate's long-standing aesthetic weaknesses: the dark line formed where the top of the counter meets the front edge. Edging made from wood, solid-surface material or beveled laminate can make that seam all but invisible, but at a higher cost.

Laminate's real breakthrough in recent years has been in the top decorative layer. Digital printing and metallic inks have resulted in higher-fidelity reproduction, allowing manufacturers to create uncannily accurate patterns of materials such as wood, stone and fabric.

PROS: Inexpensive, relatively durable, easy to clean, needs no regular maintenance, wide range of colors and patterns available.

CONS: Damaged by sharp objects and heat, not repairable.

COST: Uninstalled post-formed counters, $5 per sq. ft, $1.50 per sq. ft. for sheet laminate. Installed, $8 to $11 for post-formed, $10 to $17 for laminate sheet.

PLASTIC-LAMINATE SOURCES

See manufacturers listed for solid surfacing, p. 47.



The workhorse. Today's high-pressure laminate is aided by innovations in digital printing.