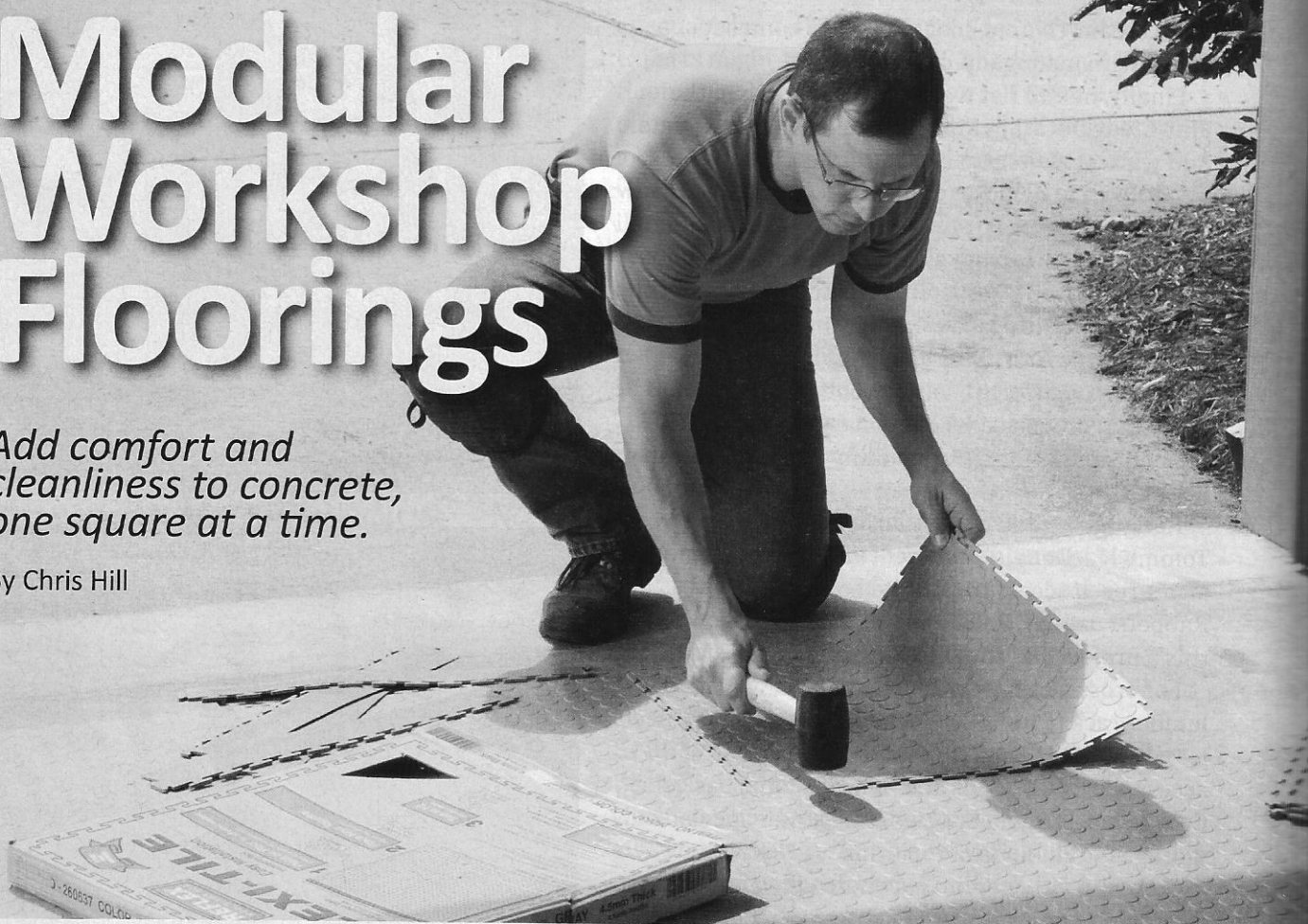


Modular Workshop Floorings

Add comfort and cleanliness to concrete, one square at a time.

By Chris Hill



As any woodworker who spends time in a basement or garage workshop with bare slab floors can attest, concrete is a cruel shop partner. Cold and unyielding, rock-hard floors contribute to a host of ailments, including chilled achy feet, sore knees, and stressed backs, all of which can cut shop time short. To add insult to injury, concrete beats up on tools as well. A topple from the workbench can chip the corner off a freshly honed chisel, snap a knob from a power tool, or crack the cast-iron body of a plane.

Too often, woodworkers don't think about shop flooring until after the heavy machinery takes up residence. At that point, most assume it's too late.

But, shop floor sufferers, you should know that a welcome variety of comfortable, easy-to-maintain solutions exist in the form of interlocking coverings. Like puzzle pieces, you can install them under or around workbenches, cabinets, and machinery, one square at a time.

To help you decide which flooring suits you best, we've distilled what's available into product categories, citing the pros and cons.

Testing what matters

While interlocking modular tiles may be new to woodworkers, they've been in factories, kitchens, and hospitals for decades. When manufacturers began offering a variety of colors and textures, the

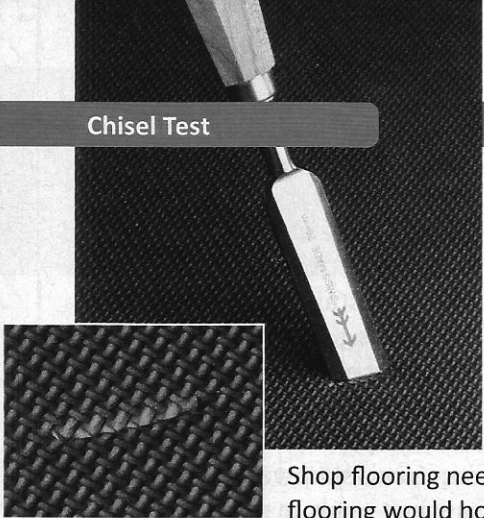
surfaces quickly showed up in the garages of car buffs, home gyms, and fitness centers. To determine the most suitable flooring, we conducted the following tests (three stars are best), targeting the needs of a woodworking shop.

Installation

Installation is a one-time issue, but because some floorings proved easier to lay down than others, it deserves inclusion. Among the samples are floorings that lift up easily should you want to relocate your shop. One sample proves to be more permanent.

Comfort

We gave each product a "feel" test by standing on samples for approximately one hour while working at a bench. To come up with some quantifiable results, we



Chisel Test



Crush Test



Spill Test

Shop flooring needs to do more than just look good. To determine how flooring would hold up, we put the samples to workshop-specific tests.

also used an infrared noncontact thermometer and measured the temperature difference between a concrete floor and the flooring.

Compression

How much give or resilience a flooring offers can be good or bad. Thinner, more compact materials provide less cushion between you and the floor than thick or spongy varieties. Also, a sharp tool dropped on thin flooring may slice through it and chip on the concrete below. By contrast, thick or

spongy floors serve to reduce damage to dropped tools but can make it difficult to move heavy machinery around the shop or level tabletops.

In this case, we conducted drop and crush tests. First, we dropped a sharpened $\frac{3}{4}$ " chisel from workbench height and inspected the tool edge and floor samples. Next, we placed a 240-pound contractor table saw on each for 12 hours and then examined the deflection from the tool's weight.

Cleanup

Spills are a part of life. A shop floor needn't be clean enough to eat from, but an ideal floor should resist stains and prove easy to sweep. To test flooring here, we spilled latex primer, oil-based stain, and piles of sawdust on the samples, and then cleaned them in similar fashion. This representative selection can be found at home centers like The Home Depot. Do your entire shop or consider just a few critical areas, as your budget allows.

Mix-and-Match Mats

If you can't afford to cover your whole floor, go with strategically placed solutions, letting store-bought place mats treat your feet.


- Door mats (\$9-\$15) make for cleaner homes. They're relatively cheap and somewhat disposable, making for quick replacement. Both the textured style and scraper style mats work great for brushing the soles of your shoes to
- avoiding tracking sawdust into the house. Utility mats provide a good bit of comfort underfoot.
- Antifatigue mats (\$20-\$40) are ideal for dedicated work spaces, such as around a workbench or stationary tools. While the square foot price puts them on par with modular flooring options, their beveled edges makes them less suited for side-by-side positioning.



Anti-Fatigue Mat



Textured Door Mat

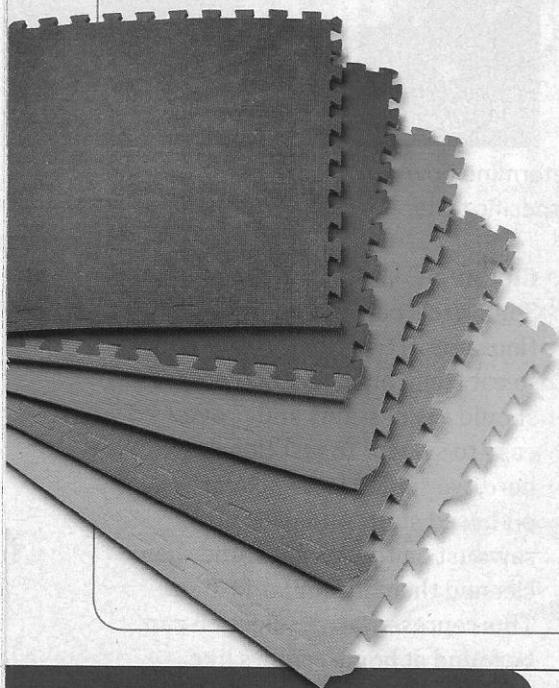


Indoor/Outdoor Utility Mat

Foam/Ethylene Vinyl Acetate (EVA) Soft Linking Mat

Tile Size: ½" thick × 2' × 2'

Cost: about \$1.11/sq. ft.



Installation ★ ★ ★

Lightweight and moderately fast to lay down, these interlocking tiles cut easily with a utility knife. Measure to terminate tile rows with a half tile or greater. The tiles slide a bit on a bare floor, but you can tack them down with double-faced tape or anchor them in place with stationary machines.

Comfort ★ ★ ★

Working on the foam is very comfortable, and the tiles provide good defense against cold, tired feet.

Compression ★

The chisel had no trouble sinking into the foam, but didn't chip. The padding creates some problems with machinery. The tablesaw rolled with difficulty over the flooring,

and its wheels left considerable compression marks. Leveling heavy machinery may require some shimming.

Cleanup ★ ★

Paint and stain did not penetrate the flooring, but did stain the surface and collected in the small divots. Sweeping sawdust proves challenging and requires a shop-vac chaser. Also, sawdust tends to make its way underneath the outside edges, so watch for buildup there.

Bottom line: Foam provides a comfortable floor for a good price provided that you don't need to roll around heavy machinery or park cars over it. It also helps insulate against the cold. Consider installing the mats around the tablesaw, bandsaw, and other heavy machinery.

Reflex Mouldings Flexi-Tile

reflexmouldingsusa.com

Tile Size: ¾" thick × 20½" × 20½"

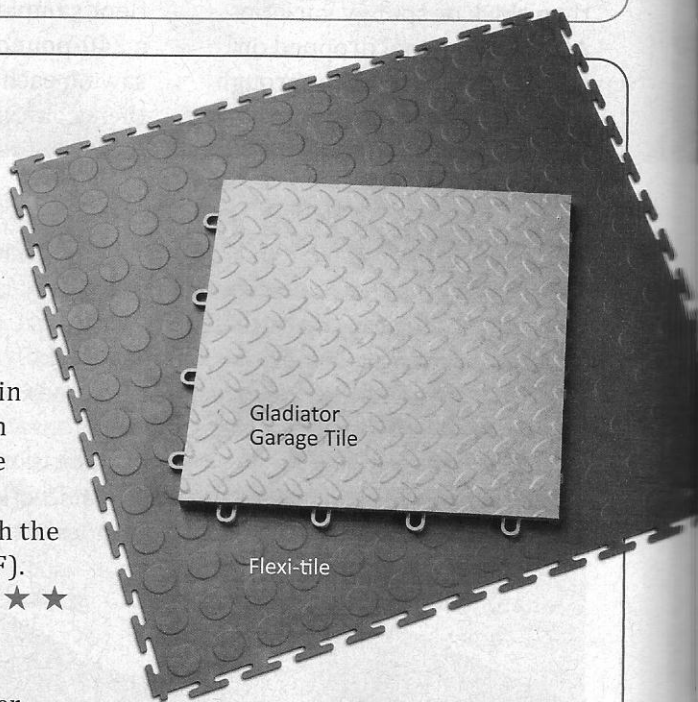
Cost: about \$4/per tile

Comfort ★ ★/★ ★

Working on these products is not nearly as comfortable as the foam, but the Flexi-tile comes close. There is a negligible difference in temperature between the bare floor and the Flexi-tile, but a much higher difference with the Gladiator tile (3.5-4°F).

Cleanup ★ ★ ★/★ ★ ★

Paint and stain both clean up swiftly and do not penetrate either of the two products. No discoloration appears on the cleaned surfaces. Sawdust sweeps up easily, but you need a vacuum to clean the seams. **Compression** ★ ★ ★/★ ★ ★ Chisels left their marks in the test but did not cut through. The



Gladiator Garage Tile

gladiatorgarageworks.com

Tile Size: ½" thick × 12" × 12"

Cost: about \$4.40/sq. ft.

Installation ★ ★ ★/★ ★

Flexi-tiles—used in our featured garage shop—install like foam, only faster. The loop-and-wedge-edged Gladiator tiles are harder to attach and separate. Both of these plastic tiles are extremely slick on bare floors, requiring adhesive or double-sided tape in traffic areas. They stay put under the weight of machinery. And you can cut tiles to fit at the tablesaw or bandsaw.

table saw rolled over both tile types with no trouble, leaving no visible compression marks.

Bottom line: Plastics are pricey, but offer a tough floor that's suitable for machinery and cars alike.

Rubber Interlocking Antifatigue Mat

Tile Size: ½" thick × 36" × 36"

Cost: \$2/sq. ft.

Installation ★ ★

These mats can be interconnected and are easy to place and install. They are difficult to cut to fit, so you'll need heavy-duty shears or a good utility knife.

Comfort ★ ★

These mats are comfortable to stand on, but the perforations tended to catch boot treads and heels.

Cleanup ★

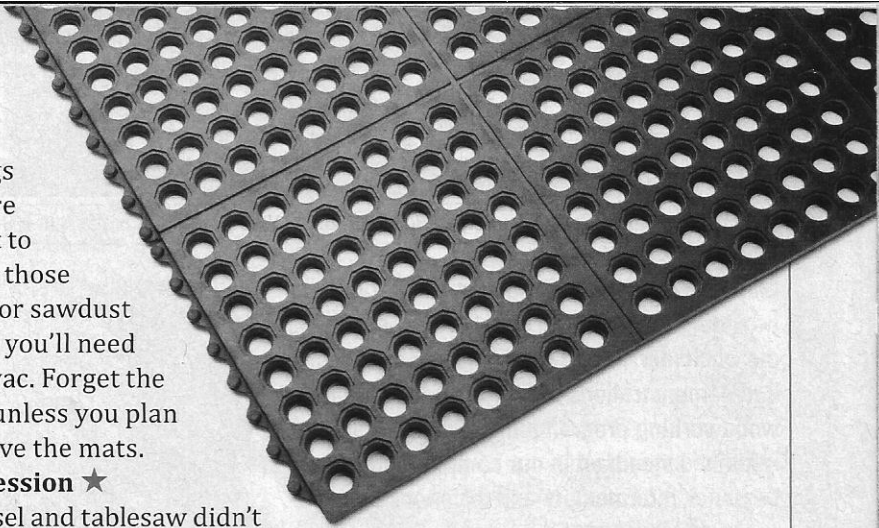
Paint and stain flowed easily

into the openings and were difficult to clean in those areas. For sawdust cleanup you'll need a shop vac. Forget the broom unless you plan to remove the mats.

Compression ★

The chisel and tablesaw didn't leave much of a mark on the mat, but holes were the biggest problem. Miss the mat, and the tool's edge could kiss the concrete. The holes also made it very difficult to roll and level the saw.

Bottom line: These mats are best used in areas where you'll be stationary and won't be making many lateral foot movements, such as at a bench grinder or drill press.



Wood Tongue-and-Groove Composite Wood Tiles

DRicore, dricore.com

Tile Size: ⅞" thick × 2' × 2'

Cost: about \$1.75/sq. ft.

Installation ★

The tongue-and-groove panels required the most work to install. Starting in a corner, use a block of wood and hammer to drive the tiles together, wood face up. Because of the polyethylene moisture-backer on the underside of the OSB (oriented-strand board), the tiles can slide. You'll need to fasten each one in place with a ¼" concrete screw.

Comfort ★ ★

Working on the flooring is similar to working on any wood flooring. It feels good underfoot while protecting against the cold concrete. That said, wood isn't as comfortable as the foam or plastic.

Compression ★ ★ ★

The tiles passed the chisel and tablesaw test with flying colors, but their thickness could be a

problem. If you plan to cover only a section of floor, you'll need to make a transition strip so tools can roll on and off. Like a plywood floor, the wheels of heavy machinery can mar the surface.

Cleanup ★ ★

The coating on the OSB face kept paint and stain from penetrating; however, both finishes stuck into the nooks and crannies of the surface. You can easily sweep sawdust off the tiles, but it tends to fill the seams. Use a shop vac to pull it out.

Bottom line: Although intended for use as a subfloor, Dricore works effectively as shop flooring and is the closest thing to having a wood panel floor without the hassle of laying studs and sheathing. Unlike other floorings, you can install a hardwood floor on top at a later date. ■

