

# Fight Mold With Paperless Drywall

Switching to fiberglass-faced drywall makes kitchens, baths, and basements more mold resistant, but it also means adopting some new work habits

## PAPERLESS PRODUCT CHOICES



Paper-faced mold-resistant drywall panels are made by most gypsum companies, but only a few make paperless gypsum for interior applications. The average cost for a 1/2-in.-thick 4x8 sheet is about \$18, but thicker panels and different sizes are also available from each company.

Aqua-Tough  
[www.usg.com](http://www.usg.com)

DensArmor Plus  
[www.gp.com](http://www.gp.com)

GreenGlass  
[www.templeinland.com](http://www.templeinland.com)



BY MYRON R. FERGUSON

Let's face it—there's been a lot of talk about mold in the past few years. The topic has gotten plenty of attention in the news, has been the focus of lots of building-science research, and has made many homeowners nervous. Here's the thing: Mold spores are everywhere and are nearly impossible to avoid, never mind eliminate. What we can do, though, is help to prevent those mold spores from taking root in our indoor living spaces. That's where products like paperless drywall come into play.

Mold needs four things to grow: oxygen, water, a temperature between 40°F and 100°F, and an organic food source. Considering this group of ingredients, it's not surprising that mold is commonly found on lumber in the basement, on the wall behind the sink in the kitchen, and on the wallpaper adhesive in the bathroom.

The first step in preventing mold growth is to get firm control over the level of moisture in the air (see "Breathing Fresh Air Into Bathroom Ventilation," *FHB* #167 and online at [FineHomebuilding.com](http://FineHomebuilding.com)). After that, the focus should be on eliminating the organic food source.

### Paper is a gourmet meal for mold

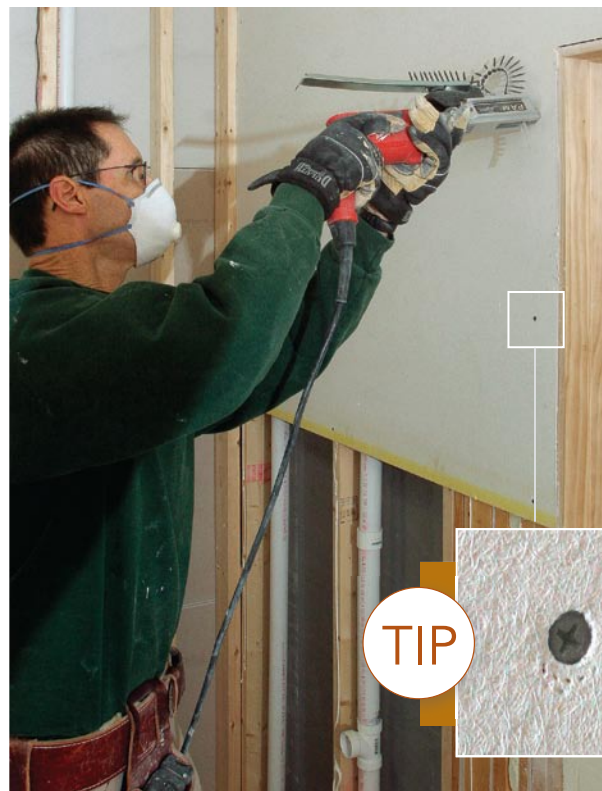
Because mold decomposes organic (once living) material as a food source, the paper facings on the front and back of drywall are an easy target. Most drywall manufacturers have fought this problem by offering modern versions of the old wax-coated "greenboard" that has been used in bathrooms for years. Many of these modern paper-faced products even scored a perfect 10 on the ASTM standard for mold resistance. For the ultimate peace of mind, though, a few drywall manufacturers have now created paperless drywall, removing all sources of organic food ("Paperless product choices," facing page).

By replacing drywall's paper facing with an inorganic fiberglass mat, products like Dens-



### BACK UP SCREWS WITH ADHESIVE

Paperless drywall can be fastened with ordinary drywall screws. I use 1¼-in. screws for both ½-in. and ⅝-in. panels. Because these panels are harder to fasten properly, I don't rely on screws alone.



**Adhesive is cheap insurance.** Applying a bead of drywall adhesive not only reduces the number of fasteners necessary on wall panels (chart below), but it also makes up for the high likelihood that some of the fasteners will be set too deep. Without the paper facing, it's much easier to over-drive fasteners into fiberglass-faced products. Make sure to adjust the clutch of the screw gun so that fasteners are driven until they indent the surface of the board slightly, but not so far that they tear through and lose holding power. Consider adhesive and screws to be best practice with fiberglass-faced products.

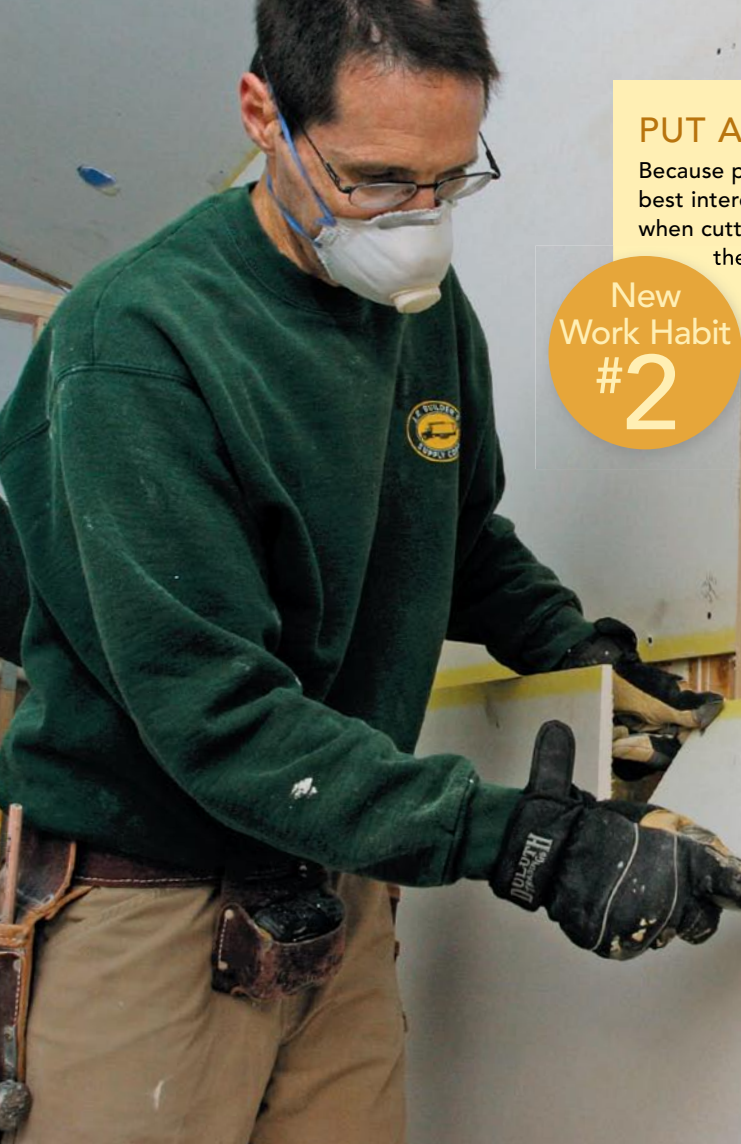
### TIP

I often leave screws slightly proud and then sink them by hand for a perfect dimpled depth.

**Glue means fewer screws.** There are several brands of drywall adhesive on the market, but any construction adhesive that meets ASTM C-557 can be used. If the local building inspector wants to see the proper amount of fasteners and can't verify what's behind the walls, consider the belt-and-suspenders approach: adhesive and standard screw spacing. See the chart at right to compare fastening schedules with and without adhesive.

Framing	Walls	Walls with adhesive	Ceilings	Ceilings with adhesive
16 in. o.c.	Every 16 in.	Every 24 in.	Every 12 in.	Every 16 in.
24 in. o.c.	Every 12 in.	Every 24 in.*	Every 12 in.	Every 16 in.

\* Every 16 in. if the wall is load-bearing



## PUT AWAY POWER TOOLS TO MINIMIZE DUST

Because paperless drywall has fiberglass facings on the front and back, it's in your best interest to keep airborne dust to a minimum. I recommend wearing a dust mask when cutting these products. Drywall dust alone warrants a mask. Add fiberglass to the equation, and your throat and lungs can become seriously irritated. Also, gloves and a long-sleeve shirt will help you to avoid getting itchy slivers of fiberglass on your hands and arms.

New  
Work Habit  
#2



**Avoid the router where possible.** Drywall routers are a fast method for making drywall cutouts. In fact, they leave an even cleaner cut in paperless drywall than in regular paper-faced products. However, they create an enormous amount of fiberglass-laden dust. For cutting around electrical boxes, the small amount of dust is a fair trade-off for the more accurate cutout, but for door and window openings, use a utility knife and a handsaw.



**If you use a router, use it smart.** If you can't bring yourself to part with the drywall router, there are still ways to minimize the dust. Begin by avoiding the larger 1/4-in.-dia. "window and door" drywall bits. Bigger bits can be pushed harder and faster and are less likely to break, but they also create much more dust than the standard 1/8-in.-dia. bits.



Window and door bit

Standard 1/8-in.-dia. bit

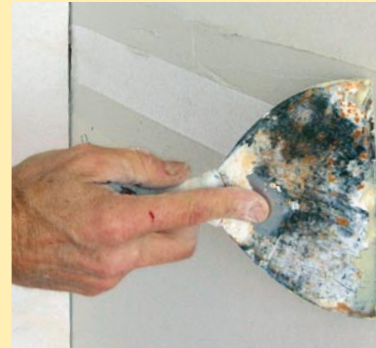
TIP

Large offcuts falling to the floor can kick up lots of dust. To avoid this, leave a little bit of drywall at the edge of the cut, then slice the piece free with a utility knife and carefully remove it.

New  
Work Habit  
#3

## SWITCH TO INORGANIC TAPE

Paper tape set in premixed joint compound is a manufacturer-approved option for finishing joints on paperless drywall, but most encourage the use of setting-type compound (photo right) and mesh tape, which further reduces the chances of mold growth by removing a food source. Standard mesh tape is widely available and a fine choice, but I prefer FibaFuse fiberglass tape (photo left; [www.sgtf.com](http://www.sgtf.com)), which has a thinner open-fiber weave. Either way, these tapes come with their own set of rules.



### TIP

Use a relatively new taping knife for working with mesh tape. The older the knife, the sharper the edges will be.

**Embed the tape with care.** Apply the mesh tape in a thinned mixture of compound because it's easy to cut through fiberglass tape accidentally with the edge of a taping knife. Likewise, use a corner knife to avoid tears on inside corners, a relatively new knife for the rest of the seams, and fairly gentle handling all around.

Armor Plus (shown in this installation) offer excellent mold resistance compared to standard paper-faced wallboard products. But don't get a false sense of security; these products are only as good as the installation.

For example, I once had a truckload of paperless drywall delivered to a job site, and when I started to install the product, I noticed that the back side of one sheet was dirty. I guess the drywall must have been stacked at a convenient height for a lunch or a coffee break because somebody had spilled coffee or soda on it. Then dirt and sawdust from the lumberyard and the job site clung to the sheet. If I hadn't noticed the stain and tossed the sheet, I would have quickly defeated the mold resistance of the paperless drywall. If paperless drywall isn't handled properly or installed correctly, the job may be little more than a pricier route to the same place.

Paperless products behave similarly to standard paper-faced drywall, but they are a bit more fragile to handle and install, require different products to tape, and typically must be finished to a more uniform surface before being painted. Learn these quirks, though, and you're likely to have a successful experience with paperless products. □

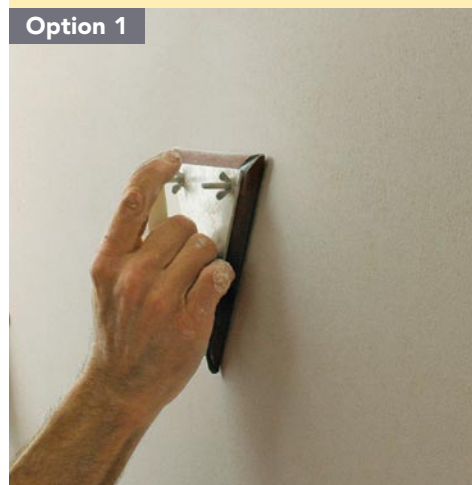
Myron R. Ferguson ([www.thatdrywallguy.com](http://www.thatdrywallguy.com)) is a drywall contractor in Galway, N.Y. Photos by Justin Fink, except where noted.

New  
Work Habit  
#4

## SAND WHERE YOU CAN; SKIM-COAT WHERE YOU CAN'T

Fiberglass-faced wallboard has a slightly rougher surface than paper-faced drywall, and there's a lot of fuss about how to make this surface blend with the smooth-sanded taped seams. A typical drywall job is taken to what's known as a level-4 finish: two coats of joint compound on all seams. Paperless drywall can be finished to the same level, but only if you plan to roll on a high-solids primer. It's not much extra work either to sand all the walls lightly to knock down the fiberglass texture or to do a level-5 finish (two coats of joint compound on all seams, followed by a skim coat of the entire surface).

### Option 1



**Lightly sand the walls and ceilings** after applying the third coat of joint compound to the seams. Unlike paper-faced drywall, these products become smoother when sanded. The trade-off to this faster approach is more airborne fiberglass dust, so protect yourself accordingly.

### Option 2



**Skim-coating the entire surface of the drywall** with a thin layer of joint compound is fine if you're comfortable with taping knives. In fact, this is the best option for any type of drywall that will be coated with high-sheen paint or exposed to strong raking light at any point in the day.