



HOW-TO BOOKLET #3041 DRYWALL JOINTS



TOOL & MATERIAL CHECKLIST

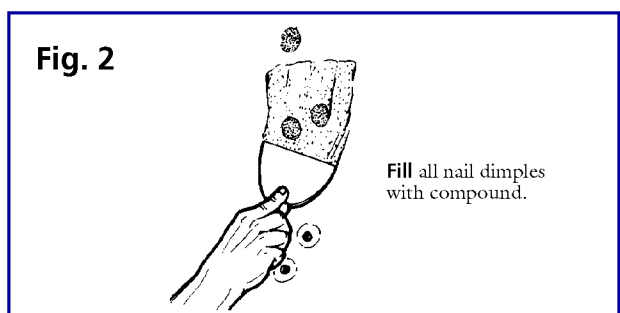
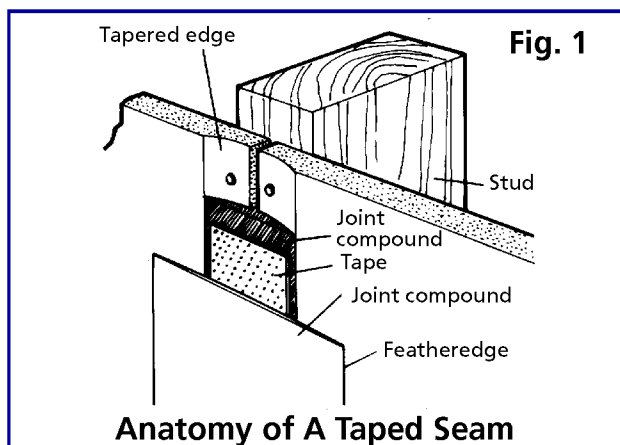
- Gypsumboard Nails
- Carpenter's Square
- Dust Mask
- Sanding Block
- Joint Tape
- Razor Knife
- Mixing Bucket
- Level
- Sponge
- Medium Grit Sandpaper
- Gypsumboard Sheets
- Joint Compound
- Taping Knife
- Hammer

Read This Entire How-To-Booklet for Specific Tools and Materials Not Noted in The Basics Listed Above.

It's known by several names including the names manufacturers give it: Sheetrock, drywall, gypsumboard, gypsumboard wallboard, plasterboard. Sheetrock is a trade name. Most other names are generic and are used according to national region. In this How-To Booklet, we'll refer to it as "drywall."

Drywall is a replacement for lath and plaster construction. Since plaster utilizes water in its application form, drywall was developed for production-built houses; builders don't have to wait the long periods of time it takes plaster to dry so it can be finished with paint, wallpaper, etc.

Even if the original walls in your home are lath and plaster construction, you can use drywall on new walls (or as patches) for ease of construction and economy. Properly applied, there will be no apparent difference between drywall and plaster surfaces. When walls have been painted or papered, they will be identical in finish texture.



There are three types of drywall products. One type has a standard “paper” wrapper for use in general construction. The other type has a water-resistant wrapper for use in bathrooms and where there is a high humidity problem. The water-resistant product often is called “greenboard” because the wrapper has a greenish cast to it. Greenboard is more expensive (usually) than its standard drywall cousin, although both materials are not generally costly. A third type is fire-rated or fire-resistant, and it will be so noted on its paper covering at the edges. It usually costs a tad more than standard drywall.

Drywall is fairly easy for a do-it-yourselfer to install. The material is heavy, and it is recommended that you have a helper when installing the panels to studs or rafters. Nailing is easy; taping is not so easy, but the job is within the skills of a do-it-yourselfer if you have the proper tools and a little patience (Fig 1).

The most important drywall tool to have is a 6-inch-wide taping knife. We also recommend that you invest in a 9-inch-wide taping knife. These tools can save plenty of time and effort.

Drywall thicknesses range from 1/4-inch to 5/8-inch in the three types detailed above. The “standard” thickness is 3/8-inch. The sheets are available 4-foot wide, with the common size 8 feet in length. However, drywall is made in 6-to 14-foot lengths, and some stores may have pre-cut pieces 2x2- and 2x4-feet. A full range of sizes may not be readily available. It is recommended that you check sizes before designing a layout pattern of the sheets.

As a rule of thumb, use 1/2- or 3/8-inch sheets when applying them directly to studs, and 1/4- or 3/8-inch sheets when applying them to an existing wall surface—including plaster.

Nailing plan. If you have never worked with drywall, it’s a good idea to carefully plan out the project before you begin to install the drywall. First, learn what size sheets are available in your area and draw a layout and nailing plan on

graphpaper. A good plan will save cutting, material waste, and give you the fewest number of joints to tape. For a standard 8-foot ceiling, install the panels horizontally, installing the bottom panel first. The top edge of the bottom panel will help support the top panel while you nail it. Also, this plan will keep joints to a minimum and put them at a good working level for you.

INSTALLATION PROCEDURES

If plans call for a drywall ceiling, apply the panels to the ceiling first. Then install the bottom wall panels, and, finally, the top wall panels.

For ceilings over 8 feet, use longer sheets of drywall, if possible. If not, install the bottom panel first, and then the top panel against the ceiling. Then fill in the gap between the top and bottom panel. This will make for easier nailing and taping because the joints are at a working level.

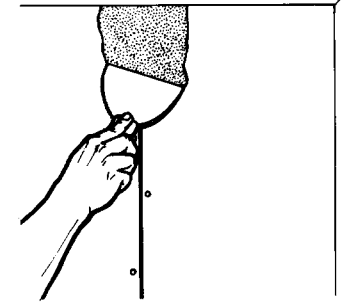
CAUTION: When cutting and sanding drywall, always wear a dust mask or respirator.

To cut drywall, score the paper wrapper with a sharp utility razor knife. Pull the knife along a straightedge such as a straight 2x4. Better yet, buy a drywall T-square for cutting, especially if you have many drywall panels to size. The squares are inexpensive and you can use them for many other home maintenance and improvement projects.

After scoring the paper wrapper, lay the panel over a length of 2x4 so the scored line is about even with the edge of the 2x4. Then snap the core of the board with a quick hand motion. This will break or fracture the drywall along the scored line that you made. Then turn over the panel and cut the wrapper at the back of the panel.

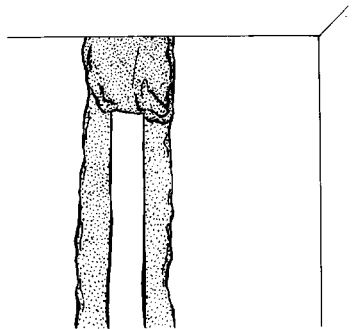
At this point mark all electrical outlets, phone connections, and video jacks. Although it takes a bit of work, the best way to mark these projections is to color the edges of the boxes with a China marker. Or, you can attach carbon paper, carbon side out, over the boxes. Then position the panel correctly and lightly tap the panel where the boxes

Fig. 3



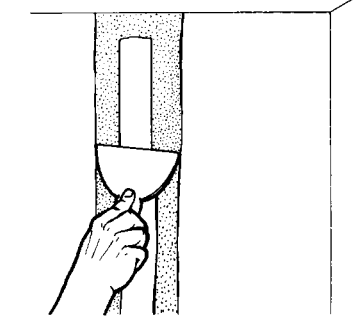
Start seam with 1/8-inch thick compound.

Fig. 4



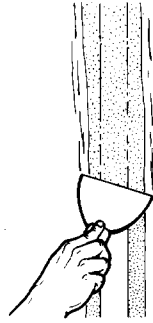
Lay in tape and fix it at top with compound.

Fig. 5



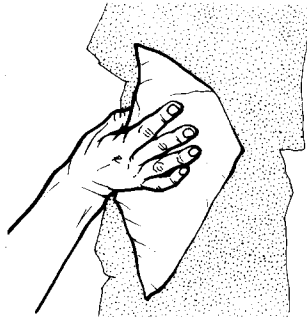
Embed tape in compound with knife.

Fig. 6



Apply compound over the tape.

Fig. 7



Lightly sand first coat of compound.

Fig. 8



Apply finishing coats of compound.

are located. The outline will be transferred to the panel via the carbon.

Cut along the outlines and then diagonally from the corners. Knock out the pieces with a hammer, but take it easy with a hammer so you don't damage the edges of the drywall.

Another way to mark the panels for cutouts is to measure the distance from the outlet to a corner of edge and mark it accordingly. But measure twice and cut once, and remember that you probably are working with the face of the panel and the cuts will be opposite unless you cut from the back of the panel.

The drywall panels are installed with special drywall or gypsumboard nails. If you have lots of nailing to do, we suggest that you buy or rent a electric nail gun. The price is not prohibitive. If you use nails, nail into the studs. If the wall is not even, add furring strips. Nail in far enough so the surface of the board is dimpled but so the paper is not broken. The trick is to drive the nail flush with the paper surface and then strike the nail head one more time. This creates the dimple which later will be filled with joint compound.

The nails should be spaced from 5 to 7 inches apart on ceilings and from 6 to 8 inches apart on walls. The nails should be between 1/2- and 3/8-inch from the edges of the panels. When nailing the lower panels, use a wedge or lever you can make to hold the sheet firmly, but not forcefully against the upper sheet IF you install the upper sheet first. Otherwise, if the bottom panel is set first, the top panel can ride on the edge of the bottom panel. No lever is needed. When the panels are fastened into position, use a saw to cut out door and other large openings.

TAPING DETAILS

Drywall joints are taped with a paper material and joint compound that you can buy already mixed or in powder form that you mix yourself with water. The outside corners are finished with a metal bead, instead of paper tape; inside corners are paper-taped.

The metal edging is used to protect the corners from hard knocks which would damage the edges.

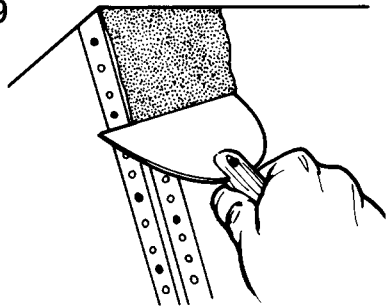
Sealing joints and filling holes. It will require two spot coats of joint compound to cover the dimples where the board has been nailed (Fig 2). Let the first coat dry before applying the second coat. Apply compound to fill the channel formed by the tapered edge of the board at the joint (Fig 3). Place the joint tape on the compound while the compound is still wet (Fig 4). Embed tape in the compound with a knife (Fig 5). Then apply a 6- to 8-inch wide coat of joint compound over the tape (Fig 6). Lightly sand the first coat when dry (Fig 7). When this is dry, a final coat, 12- to 14-inches wide, should be applied (Fig 8).

Let the final coat set about 24 hours or even longer if there's lots of humidity in the air. Then with a damp flat sponge, smooth the compound. You may have to lightly sand the area to smooth the joints completely after the joint compound has thoroughly hardened. Easy does it. You should use a sanding block so you don't dig the compound. If you do have problems, go back over the area with a thin coat of joint compound. Smooth it with a tapping knife, then use the damp sponge again, as detailed above.

If you look closely, you will see that the edges of drywall are slightly tapered. This taper accepts the thickness of the tape and the joint compound so the build-up of these two materials match the surface of the drywall panel.

Installing outside corner bead. The bead strip or molding should be nailed through the drywall and into the framing underneath. Use a drywall knife to apply a 6-inch-wide coat of joint compound on each side of the bead. After the first coat is dry, apply a second coat over the first about 9 inches wide. Feather the edges of the joint compound so the edges "taper" away from the metal bead left showing at the corner (Fig 9).

Fig. 9

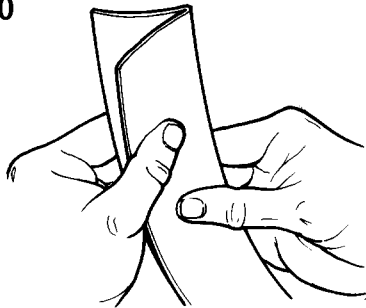


Run compound over metal corner.

When the compound has hardened, go over the surface of the compound with medium grit abrasive (sandpaper). Use a sanding block; you don't want to dig into the compound, which is soft, and leave marks that can't be covered with paint. If the wall will be papered, the marks are not as critical; you should, however, make the job as smooth as possible—paint or paper.

Taping inside corner. Carefully crease regular drywall tape lengthwise down its center. The trick is to get the edges matching and then, on a flat surface, run a taping knife along the tape to crease it. After you practice this a couple of times, the job will become easy to do (Fig 10).

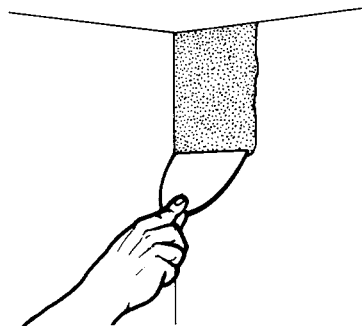
Fig. 10



Fold tape for inside corner.

Apply a coat of joint compound to both sides of the joint (Fig 11). You want the compound fairly thin—just about the thickness of the tape that will be embedded in it. While the compound is wet, press the joint tape into the compound with your fingers, getting it evenly into the corner (Fig 12). Then, with the taping knife (use at least a 6-inch-wide knife) press the joint tape into the joint compound, being careful not to dig into the tape where it bridges the corner joint. Feather the edges of the compound from the tape out onto the panel. Let the compound dry. Then apply another coat of compound about 6 inches wide over the tape on one side of the corner (Fig 13). Let the compound dry. Then repeat the treatment on the other side. When the compound is hard, sand the joint area lightly with medium grit abrasive. Do not over-sand or you'll dig into the tape.

Fig. 11



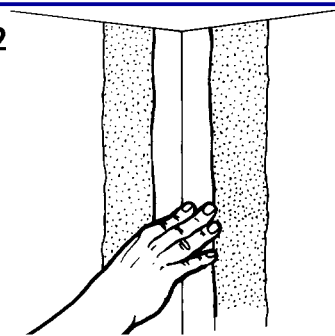
Fill inside corner with compound.

When the split is opened, squirt glue in back of the tape. Press the tape down with your fingers. If the tape wrinkles at this point, cut it just slightly with the razor knife. The cut should let you position the tape flat against the wall surface.

Clamp the tape in position with straight pins. Push the pins through the tape and into the wall surface. Let the glue dry for a couple of days, and then remove the straight pins.

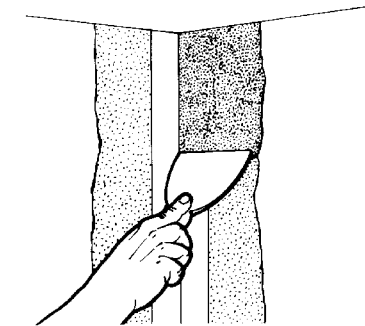
Complete the project by touching up the area with paint, which will fill the pin holes and the razor cuts in the tape. You may have to repaint the entire wall to blend the repair in with the wall surface.

Fig. 12



Embed tape into compound

Fig. 13



Finish inside corner with compound over the tape.

MENDING SPLIT TAPE

Very carefully cut and open the split tape with a razor knife. What you want to do is give yourself enough working room so you can force glue behind the tape.