

Contractors' Tips For Spray Cellulose

by Tony Walker

Smooth installation and good performance rely on good prep work

Cellulose insulation is a mixture of paper stock and chemicals ground together. The chemicals regard fire and inhibit corrosion. Cellulose is widely used to insulate ceilings and wall cavities in retrofits. More recently, it has grown in use in new construction, as well, in a wet spray-on form (see "Spray It," *JLC/NEB* 8/87).

I've been installing spray cellulose insulation for some time now, and obviously I prefer it over fiberglass. I believe it makes for a tighter building. But the installation process is quite different than for fiberglass. If you decide to use this type of insulation in your houses, here are some tips to keep in mind. They're not really difficult, and they'll make your installer's job easier. In the end, you'll get a better job.

Wet-Spray Tips

- Make sure electrical and plumbing inspections are complete before spraying, since it will not be possible to simply push aside the insulation. Wiring, plumbing, and heating pipes should be fastened down and should not protrude beyond the studs.
- Framing should be complete, especially nailing for drywall.
- Inquire about your installer's electrical needs; 40 amp/220 volt current is common.
- Inform your installer if your new well has not been pumped clean of silt. The spraying process uses water pumped at high pressure through fog nozzles; silt destroys them.
- Leave the space to be insulated as clean as possible, free of all debris, especially nails. Excess materials on the floor will be swept up and recycled through the machine.
- Keep any building materials left on the site—anything that may clutter the work area—gathered together. Keep them covered with plastic and away from walls to be sprayed.
- Leave at least 5 feet clear from the walls to be sprayed. The spray applicator needs this much clearance to work properly.
- Framing members should either touch, leaving no gaps—or not touch, with enough of a gap for effective insulation. At least 1 inch on 2x4 walls and 1 1/2 inches on 2x6 walls is best. The spray will fill voids between studs easily and thoroughly, as long as the space is not too narrow.
- Avoid any framing that leaves a gap of more than 2 inches to the sheathing, such as horizontal blocking or strapping. Spray cellulose tends to blow by. This isn't crucial, but makes the work easier.
- Similarly, keep gaps behind studded-out walls to a minimum, preferably no more than 1 inch.
- When framing corners and where partitions meet exterior walls, use systems that leave one side open to allow for spraying (see Figure 1). And leave at

least 12 inches to the next stud to allow the installer room to direct the spray into these spaces.

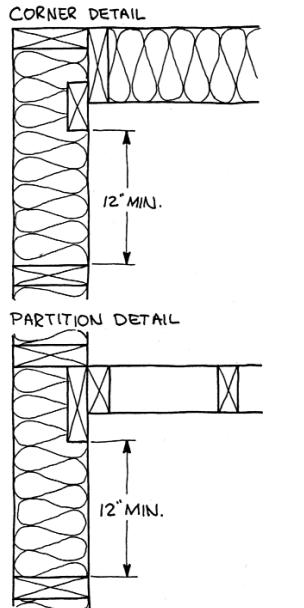


Figure 1. When framing corners (top) and partition junctures (bottom), leave one side open for spraying, and leave at least 12 inches to the next stud for spraying access.

- If fireblocking is done between balloon-framed studs, it should be nailed level with the bottom of the joists to leave a cavity that can be sprayed from above. Don't leave a cavity that must be sprayed from below (see Figure 2).

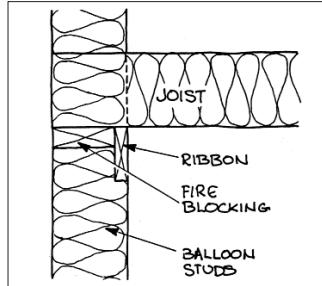


Figure 2. In balloon framing, nail firestopping level with the bottom of the joists to leave a cavity that can be sprayed from above.

- If you are expecting to have the box beam or band joists sprayed between the joists, leave a clear shot of at least 3 feet for applicator access. Leave off one or two furring strips but put on the one that touches the wall.
- Bath and shower fixtures on exterior walls should either be left out so these areas can be sprayed, or enclosed so

that they can be blown in properly. In other words, there must be an enclosed cavity to blow into.

Dry-Blowing Tips

Even when installing by the wet-spray technique, blowing in conventional dry cellulose is often part of the job, especially for attic and ceiling areas. Here are some tips:

- If a cavity is left closed and you expect to have it drilled and blown, then mark hidden obstructions, such as blocking.
- Where closed cavities are to be filled by pushing a hose or pipe down its length, eliminate all protruding objects, such as nails, which may hang up hoses.

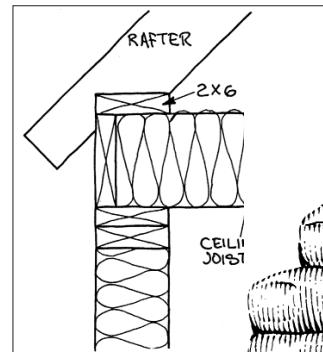


Figure 3. To get full insulation at the eaves, use raised-heel trusses or set rafters on top of a 2x6 sitting above the joists, as shown.

- If possible, hang ceiling dry your insulator comes to spray so that there's no need to come back later to blow into attics and ceilings.

Eaves and Vents

Though not specific to cellulose, there are a couple of additional things that are well worth mentioning:

- For best results with attic insulation, use raised-heel trusses, or set rafters on top of a 2x6 that rests flat on top of the ceiling joists rather than setting rafters beside them (see Figure 3).
- Where the design calls for a vented cathedral ceiling and the roof framing is complex—dormers, valleys, hips—consider the actual pattern of air flow. It may be inadequate. Therefore you may want to put down a thin sub-sheathing over the rafters to contain the insulation. Then the furring can be laid out to create ventilation channels between the sub-sheathing and the final roof sheathing, which will be nailed down to the furring. The thickness of the furring will increase from 3/4 inch depending on the length of the runs and their complexity. ■

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