NATIONAL FIBER
CEL-PAK INSULATION

Professional Cellulose for Cellulose Professionals

Installing Dense Pack Cellulose in Blind Cavities in New Construction

When insulating blind cavities, dense packed cellulose is pneumatically injected at 3.5 lbs/cuft behind drywall or rigid insulation materials. This is frequently necessary when insulating steel framed buildings or in those buildings where rigid insulation materials are being used behind the drywall on the interior of the buildings. The challenge in this application is to achieve a uniform 3.5 lbs/cuft density while filling all building cavities.

The process begins by drilling a three-inch installation hole through the interior sheathing, using a hole saw, approximately four feet from the floor, or approximately midpoint for an overhead, sloped or flat ceiling application. For cavity widths of 24 inches on center, two holes should be drilled, dividing the bay into thirds. For cavities >24 inches wide, additional holes should be drilled so that each hole is no more than eighteen inches apart. A wire probe or tape measure should be used horizontally to locate the edge of the cavity on each side and then marked on the sheathing surface so that the next cavity can be accessed.

Next, a 1.5 inch diameter Tigerflex hose is inserted into the installation hole and fed into the cavity until it reaches the far end or bottom of the cavity. (If the hose can't reach the end of the cavity due to an obstruction, additional holes will need to be drilled to allow for full hose access.) The hose is then pulled back about six inches from the end of the cavity and the air (blower) is turned on. After the hose has cleared of cellulose, the agitator of the blowing machine is engaged and the hose is held in place until the cellulose stops flowing. Immediately withdraw the hose until the material starts flowing again and then hold position until the cellulose stops flowing. This process is repeated until the installation hole is reached. The hose is then reinserted in the opposite direction and the entire process repeats until the end of the hose once again exits the installation hole.

If the cellulose at the installation hole is loose or missing, the hose is reinserted, the air (blower) turned on, and the installation hose 'jogged' to bring this area up to density. The installed density should be confirmed by consulting National Fiber's Expanded Bag Coverage Chart. Divide the square footage being insulated by the coverage per bag at the appropriate cavity depth in order to determine the number of bags required for the application. If the bag count is low for the area being insulated, then the material feed should be reduced at the machine, with the hose then reinserted into each cavity and reinsulated at the new setting to increase the installed density. Once the installed density reaches 3.5 lbs/cuft, the installation hose cannot be easily be reinserted back through the cellulose. Once the installed density is confirmed, the access holes can be plugged using foam plugs and the drywall or sheathing patched.

If you have any questions or would like to discuss this further, please contact our Technical Manager, Bill Hulstrunk at technical@nationalfiber.com.