



NATIONAL FIBER

CEL-PAK INSULATION

Professional Cellulose for Cellulose Professionals

The Facts about Smaller Diameter Blown Fiberglass Insulation Products

There are several new fiberglass insulation products on the market featuring smaller diameter glass fibers. Testing by Building Science Corporation has confirmed that cellulose insulation installed at 3.5 lbs/cf density blocks air movement more effectively than the smaller diameter fiberglass products installed at densities of 2.0 lbs/cf. There are other potential potential issues to be aware of regarding these products as well:

- **It's difficult to achieve a uniformly high density with this type of smaller diameter fiberglass product.** Air pressure in the cavity drops off quickly as you move away from the point of installation, leading to lower densities. Inconsistent density means inconsistent R-value and reduced air blocking performance.
- **Smaller diameter fiberglass products are harder for installation equipment to break apart.** In addition, their lighter weight means that they feed more slowly into the blowing machine air lock and through the installation hose. This makes these fiberglass insulation products not only more expensive to buy, but also much more time consuming and expensive to install.
- **The smaller the fiber diameter of your insulation product, the deeper they can lodge in your lungs.** For example, asbestos fibers are very dangerous due to their small fiber size. The new blown fiberglass products feature a fiber diameter smaller than that of cellulose.

How Do They Stack Up?	Cellulose	Blown Fiberglass
R-value in 2x4 wall	13	11 - 15
Resists Air Flow?	Yes-Dense packed	Yes - when packed
Smoke when Burned	0 - 5	~ 50
Functions as Fire Block?	Yes - 14.5 inches	No - Melts
Moisture Management	Yes - Hygroscopic	No - Hydrophobic
Material Cost	\$	\$\$
Deters Mold and Pests?	Yes - Borates	No
Recycled Content	+83%	~ 35%
Embodied Energy	720 btu/lb	15,000 btu/lb

While these smaller diameter fiberglass products offer the promise of the 'new and improved', complete with slick advertising campaigns, cellulose insulation has proven itself over the past 40 years to be the choice of weatherization programs across the country. Cellulose insulation dramatically improves thermal performance and effectively blocks air movement, while also making the building quieter, more fire safe, more resistant to pests and greener than any other insulation product. **Cellulose insulation is your natural choice.**

For further information, please contact our Technical Manager, Bill Hulstrunk at technical@nationalfiber.com