



## NATIONAL FIBER CEL-PAK INSULATION

Professional Cellulose for Cellulose Professionals

### The Facts about Smaller Diameter, Blown Glass Fiber Insulation Products

There are several blown glass fiber insulation products on the market featuring smaller diameter fibers. Glass fiber insulation has historically been plagued with performance issues due to its air permeability, and gaps and voids after installation. Testing performed by CIMA (Cellulose Insulation Manufacturer's Association) in 2010, at Building Science Corporation offices in Canada, proved that these smaller diameter blown glass fiber products don't offer the same air flow resistance as dense pack cellulose. The smaller fiber diameter also:

- **Reduces R-value and air blocking performance;** due to increased density drop off from the point of installation.
- **Increases installation time;** due to the difficulty in breaking the material apart and slower feed rates.
- **Reduces fire resistance;** since the smaller fibers melt easier, allowing fire to spread rapidly.
- **Increases the risk of dew point condensation;** due to its air permeable, hydrophobic properties
- **Lodges deeper in the lungs;** smaller glass fibers are more similar to asbestos in size and therefore more of a health concern.
- **Increases material costs;** increasing overall job costs and reducing the installer's bottom line.

How Do They Stack Up?	Cellulose	Blown Glass Fiber
R-value in 2x4 wall	13	11 - 15
Resists Air Flow?	Yes - Dense packed	Maybe - when packed
Smoke when Burned	0 - 5	~ 50
Functions as Fire Block?	Yes - every 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 glass fiber products offer the promise of the 'new and improved', complete with slick advertising campaigns, cellulose insulation has proven itself to be the choice of weatherization programs across the country. Cellulose insulation is greener than any other insulation product, dramatically improves thermal performance and effectively blocks air movement, while also making the building quieter, more fire safe and more resistant to pests. **Cellulose insulation is your natural choice.**

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