

*Energy conservation  
cellulose vs fiberglass*

*Scientists, engineers,  
and contractors  
have realized for many years  
that the most  
commonly-used building  
insulation material isn't  
really the best insulator.  
Now this "conventional  
wisdom" of energy  
conservation has been  
confirmed and quantified  
through scientific studies  
at one of the world's  
leading research  
universities.*



**CELLULOSE . . . insulation  
that makes sense . . . and saves  
dollars AND energy!**

Cellulose Insulation Manufacturers Assn.  
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*Results of research by a  
respected university reported by  
the Cellulose Insulation  
Manufacturers Association*


## Energy shoot-out at the CU corral


In December 1989 and January 1990 the University of Colorado at Denver School of Architecture and Planning studied the energy conservation efficiency of two test buildings that differed only in the insulation systems that had been installed.


Building "A" was insulated with 5.5 inches of wet-spray cellulose in the walls and R-30 of loose-fill cellulose in the ceiling. Building "B" received R-19 unfaced fiberglass batts in the walls and R-30 kraft-faced batts in the ceiling.

Over the two-month period a number of different tests and measurements were performed.

Here's what the CU Denver researchers learned.


 In spite of the fact that tests showed Building "B" was about 12% tighter than Building "A" in the uninsulated state, after insulation was installed building "A" was far tighter than "B." Calculations showed that cellulose tightened the building 36% to 38% more than fiberglass.


 An overnight heat loss test revealed that after nine hours (midnight to 9 a.m.) the cellulose-insulated building was 7 degrees F warmer than the fiberglass building.

 Most significantly, after three weeks of monitoring the cellulose-insulated building had used 26.4% less energy to heat than the fiberglass building.

In their statement of conclusions the researchers note that the results suggest cellulose performs as much as 38% better than fiberglass. The performance advantage of cellulose in temperate climates appears to be about 26%, and the report projects that "this benefit would become more significant in more severe climates."

Cellulose insulation benefits not covered by the University of Colorado study include:

 Cellulose insulation contains more than 75% recycled material, primarily newsprint, one of the largest parts of the waste stream. Cellulose insulation not only saves energy, it helps cities meet the growing waste disposal challenge

 Since production of cellulose requires much less energy than mineral fiber insulation, which is made in gas-fired furnaces, and foam plastics, which are petrochemicals, the "embodied energy" in cellulose insulation is much lower per "R" of insulating value than other materials. From the national perspective these savings at the production stage must be added to the superiority of cellulose as an insulator.

If you're serious about saving money heating and cooling your home, about recycling and responsible use of resources, and about saving energy for our country the only insulation to seriously consider is cellulose.



Please join CIMA in using recycled paper

## Standards

Cellulose insulation is covered by the most comprehensive legal and voluntary standards of any insulation material. To be sold at all cellulose insulation must meet the requirements of Consumer Products Safety Commission Safety Standard 16 CFR Part 1209. Most cellulose producers adhere to the more comprehensive American Society for Testing and Materials standards C-739 for loose-fill cellulose insulation and C-1149 for self-supporting spray-applied cellulose insulation. The Federal Trade Commission R-Value Rule applies to cellulose -- as it does to all residential thermal insulation -- assuring honesty and accuracy in marketing and labeling.

A number of qualified independent product testing laboratories have cellulose insulation certification programs to assure contractors and consumers that the material they buy and install meets or exceeds government and industry standards. The National Association of Home Builders National Research Center certifies the quality and performance of cellulose insulation.

The labels of Underwriters Laboratories, the United States Testing Company, and other NAVLAP-approved laboratories, or the seal of the NAHB Research Center, are reliable indicators of safe, effective cellulose insulation that conforms with all federal and industry standards

**If you want insulation that's best for the nation's energy security, the environment, and your pocketbook, choose CELLULOSE!**