NATIONAL FIBER
CEL-PAK INSULATION

Professional Cellulose for Cellulose Professionals

Cellulose Fire Blocking and Ignition Barrier Capabilities

Numerous US and Canadian studies have confirmed cellulose insulation's superior capabilities in terms of fire resistance, sound attenuation, and thermal performance. The permanently impregnated, borate-based fire retardants, along with its high installed densities, allow our cellulose insulation to retard the propagation of fire and hot gases by resisting flame spread and remaining in place much more effectively than other types of insulation and non-fire retardant treated building materials.

National Fiber's Cel-Pak cellulose insulation achieves the highest and most fire resistant material rating of Class A / Class 1 under ASTM E 84 and passes the strict Federal 16 CFR Part 1209, ASTM C 739 and ASTM E 970 requirements, having a flame spread index of 20 and a smoke developed of zero.

National Fiber's cellulose insulation has been approved as a fire blocking material under Section 708.2.1, Item 1, of the UBC, Section 716.2.1 of the IBC, and is permitted as an alternate to the fire blocking in Section R602.8, Item 1, when installed in a dry or spray application to a depth of 14.5 inches, cellulose outperforms conventional wood fire blocking in fire blocking tests.

One and a half inches of cellulose has also been approved as an ignition barrier in the 2009 ICC under section R316.S.3. This is useful in attics over foam products that have been used for air sealing.

Adding cellulose insulation to wood frame walls increases their fire resistance rating by 15 minutes. Our cellulose insulation is ASTM E 119 tested and UL approved for use in a variety of wall and floor/ceiling fire rated assemblies. For example, Southwest Research Institute Project # 01-5920-611 tested and approved a one hour fire-rated load-bearing wall assembly, consisting of a single layer of 1/2" type X sheetrock on each side of a 2 x 4 stud wall filled with cellulose insulation.

The International Building Code (IBC) 2000 & 2001 Amendments also allow electrical outlet boxes to be installed on opposite sides of a one-hour firewall, if they are offset by 3.5 inches of cellulose insulation. This offers greater design flexibility over fiberglass, which requires a minimum of 24 inches separation between outlets.

In 1994 the Research Council of Canada (NRCC) reported that fiberglass decreased the fire resistance of insulated walls, while cellulose produced a 22% to 55% increase in fire resistance. In 1995 the NRCC tested floor/ceiling assemblies and found that cellulose increased the fire resistance more than twice that of fiberglass and 40% over that from rock wool.

Even though cellulose improves fire safety, it is important to remember that cellulose insulation is not a non-combustible material and minimum clearance to hot surfaces such as chimneys and non-IC rated light fixtures must be maintained.

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