

Materials Matter

PERFORMANCE: CEMENTITIOUS VS. SPRAYED FIBER



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MATERIALS MATTER

When specifying fireproofing, it is crucial to select the product that will provide maximum building protection. Taking the time to clearly understand differences in the product options will impact the building and its inhabitants for the life of the structure.

DEFINING THE TECHNOLOGIES: CEMENTITIOUS VS. SPRAYED FIBER

Cementitious and sprayed fiber fireproofing terminology was originally developed by ASTM and UL, and has been utilized for many years to clearly distinguish between two distinctly different types of fireproofing material.

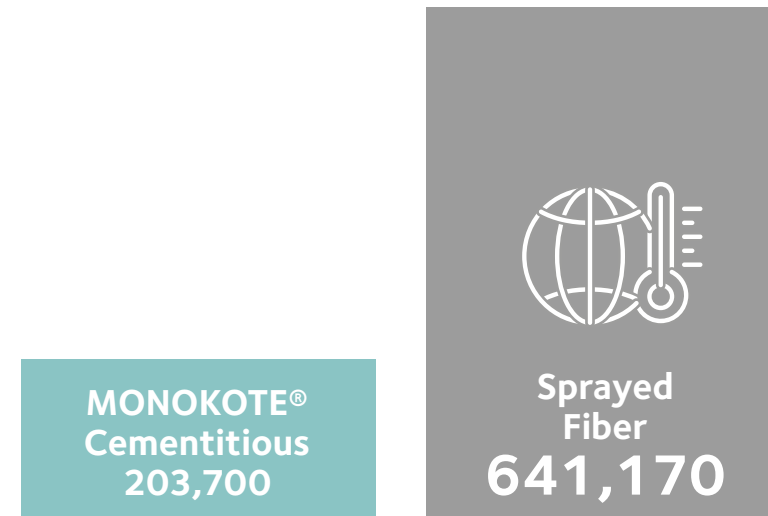
	
Cementitious	Sprayed Fiber
Refers to a product that is mixed to form a consistent uniform slurry and is then pumped to a nozzle where it is sprayed onto the substrate. The term cementitious only refers to a product that is mixed and then pumped as a slurry.	Refers to a product that is air-conveyed in its dry state to a nozzle, where water is added just prior to spray application to the substrate.

A common misconception is that the presence or absence of Portland cement used as a binder determines whether the product is cementitious. It does not.

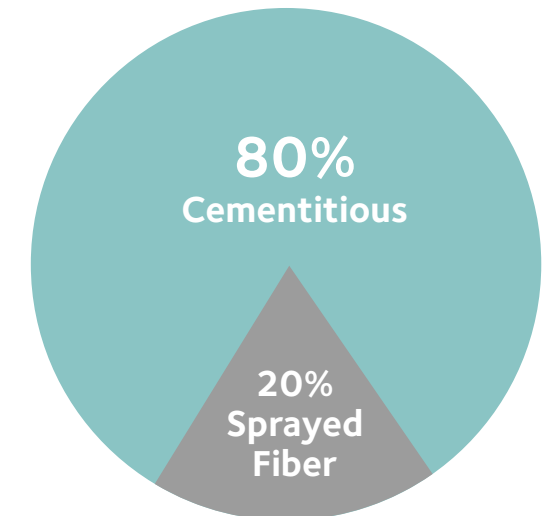
INDEPENDENT TESTING

All spray applied material passes applicable third party testing. Cementitious fireproofing materials in place performance is more consistent with laboratory testing. It is important to evaluate a materials ability to meet physical properties specified in field installed conditions. There is a clear difference in meeting testing criteria in laboratory conditions compared to field installations.

Embodied Carbon Global Warming Potential (Pounds of CO² Equivalent 20K Bag Project)



Spray Applied Fireproofing Market



THE TRACK RECORD IS CLEAR

Common industry estimates are that eighty percent of sprayed fire resistive materials are in the cementitious category. Since the 1960's cementitious fireproofing began to displace dry spray fiber products as architects and specifiers began to question the bond strengths and abrasion resistance exhibited by dry mix sprayed fiber products. In summary, if a fiber based material was better, or significantly less expensive, the market would push the segment to a higher level of participation in the category.

KEY TAKEAWAYS, CEMENTITIOUS ADVANTAGES

Cementitious fireproofing provides a more homogeneous coating when compared to sprayed fiber materials. Additionally, when comparing products, the percent weight of binder is critical because it affects all aspects of physical properties, including density, bond strength, compressive strength and erosion resistance.

Cementitious fireproofing is thoroughly mixed and sprayed in close proximity to the steel to ensure accurate application.

Cementitious fireproofing results in consistent in place density and higher in place bond strengths that starts with a consistent uniform slurry at the mixer.

Cementitious fireproofing reduces the potential for human error and increases the likelihood of a consistent product mix and application.

Cementitious fireproofing has multiple suppliers. Sprayed Fiber is only supplied by one company.

Cementitious fireproofing has a considerably lower Global Warming Potential GWP compared to Sprayed Fiber. (See Chart Above)

FIRE PROTECTION FOR STEEL-FRAMED BUILDINGS

Fire protection is not just a good thing to have in a steel-framed building—it's required by the building code. MONOKOTE® Fireproofing is an industry-leading fireproofing material for skyscrapers and critical infrastructure. More than simply a code-compliant product, MONOKOTE® Fireproofing brings with it over 50 years of proven performance in the field. It is easy for applicators to apply and it is backed by worldwide technical and field support specialists from GCP Applied Technologies. This ensures that no matter how a building gets built, MONOKOTE® Fireproofing will offer the highest grade of performance.

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