

GENERAL INFORMATION



Spray Applied Fiberglass (TC-417) Versus Spray Applied Cellulose

Spray Applied Cellulose (Sold under various brand names)

- a) Composition: Shredded paper products - may be new or recycled newsprint, cardboard or paper stock treated with water-based, **resoluble** fire retardant to slow down flame spread and smoke development. Products are mixed with waterbased adhesive at time of application;
- b) Thermal value (R) - varies from 3.4 - 3.8 per inch depending upon manufacturer;
- c) Noise reduction (NRC) - usually about 0.95 per 2 inch;
- d) Flame spread rating: varies from manufacturer to manufacturer, but all meet requirements of:
Flame spread = ≤ 25
Smoke development = ≤ 450
NOTE: Installation may require periodic overspray with fire retardant to maintain these ratings as retardant may leach out over time;
- e) Combustibility - **combustible.**
NOTE: Because these are 100% organic products they can never be rated as "noncombustible";
- f) Application thickness (underside of horizontal surface) = 3" in one pass; can be increased to 5" with second application after first is cured;
- g) Air erosion - meets requirement;
- h) Fungal resistance - meet requirements at time of application. **NOTE: Fire retardants often double as fungicides, and as they are water resoluble they may leach out over time and compromise the fungal resistance rating;**
- i) Bond Strength - sufficient to hold themselves in place on underside of horizontal surface.

Spray Applied TC-417 (Glass fibre-based)

- a) Composition - Fine, white, purpose-manufactured glass fibre (min. 25% recycled content) mixed with water-based adhesive at time of application;
- b) Thermal value (R) = 4.17 per inch;
- c) Noise reduction (NRC) = 1.00 per 2 inch;
- d) Flame spread rating:
Flame = ≤ 25
Smoke = ≤ 450 **NOTE: Installation does not require periodic overspray with fire retardant to maintain these ratings, as glass is non-combustible;**
- e) Combustibility - product is rated as **noncombustible;**
- f) Application thickness (underside of horizontal surface) = 5" in **one pass;**
- g) Air erosion - meets requirement;
- h) Fungal resistance - meets requirement (MIL-STD 810E, Method 508.4). **Will not support Stachybotrys chartarum mould, which requires cellulose-based material to support growth.**
NOTE: If further information concerning mould growth in cellulose is desired, please see our information sheet titled "Mould in Buildings: A Health Issue."
- i) Bond strength: >1.7 kPa, which is deemed by the relevant authorities to be sufficient to hold **TC-417** securely in place on the underside of a horizontal surface. **NOTE: Bond strength of glass fibre is lower than cellulose. This is because paper absorbs moisture very readily and the adhesive permeates the paper (cellulose) and forms a cohesive whole. In the case of fiberglass, the adhesive cannot permeate the glass, but encapsulates it with a very thin film to form the matrix. Thus, the adhesive, which is organic, forms only a minor part of the installation and ensures that TC-417 is rated as noncombustible.**

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