

Technical Bulletin

Interface Between Cementitious and Intumescent Fireproofing Materials

Specifiers commonly utilize both intumescent fireproofing coatings and Spray-applied Fire Resistive Materials (SFRMs) to meet commercial fire ratings detailed in the current International Building Code. Intumescent fireproofing products are used on structural members to “express” the shape and aesthetics as part of the architectural design of the steel structure, while Spray-applied Fire Resistive Materials or SFRMs are generally used for the concealed portions of the structure within walls, ceilings, plenums or mechanical areas. Since most commercial construction will use one or more separate fireproofing products or product types, the details of the interface between intumescent fireproofing coatings and SFRMs must be clarified regarding how the dissimilar fireproofing materials should be terminated.

Underwriters Laboratories has advised that the use of multiple products on the same structural member, unless specifically listed in the design, is not allowed. However, the use of multiple products, each applied to separate structural members and terminated at the connection points, is allowed provided that each structural member is fireproofed with the specific product as detailed in the applicable designs.

The standard industry practice for terminating an intumescent coating at the interface of an SFRM is to terminate the intumescent coating at a natural break or structural connection. This is done between adjacent structural steel members, such as a horizontal beam to deck connection, beam to beam connection, or column to beam connection. The intumescent coating is spray applied to the interface of the SFRM at a connection between structural steel members and extended six inches beyond the leading edge of the SFRM.

The guidelines below can be submitted to the Authority Having Jurisdiction (AHJ) for review and approval where intumescent coatings and SFRMs will be applied to adjacent structural members and will intersect each other on independently protected members.

Fireproofing of adjacent structural members:

1. The SFRM should be applied to the required thickness prior to the application of the intumescent coating.
2. The termination of the SFRM must be cut and scraped clean to provide a clean edge for the intumescent to butt up against between two adjacent structural members.
3. Apply intumescent to the structural members requiring intumescent coatings to the required thickness.
4. Overlap the intumescent coating onto and 6” beyond the leading edge of the SFRM.

