Designing For Fire Safety

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Designing high-performance buildings can be complicated. In addition, designing those buildings to be fire-rated to ensure human health and welfare can be equally complicated.

- How do I design a wall or elevator shaft or stairwell that intersects with a complicated floor deck assembly or intersects a column or a beam?
- How do I treat a penetration through the fire-resistance rated assembly?

Where can you find answers to these questions? (More about answers to the questions above a couple paragraphs down.) We have an excellent written resource that is available 24/7, and we call it The Purple Book™. Purple is a color you probably already associate with National Gypsum, and this book provides you with a product specification “cheat sheet” for fire-rated assemblies in commercial construction.

Originally developed as a guide for healthcare construction, The Purple Book addresses questions about all steel-stud framed buildings in commercial construction. It includes UL product designations, ASTM and gypsum association standards, and detailed diagrams for UL-rated wall assemblies, elevator shafts, stairwells, corridors, ceilings and more. If you haven’t already, spend a little time looking through it. We think you will find it to be an invaluable tool to help specify and install those complex fire-rated assemblies.

Now back to the two questions above. The answer to both questions is ProForm® FS-90 Compound Fire and Smoke Stop. It is a special setting compound for the treatment of penetrations in rated assemblies. One of the products highlighted in The Purple Book, FS-90 is designed to provide protection in fire-stopping penetrations through fire-rated partitions or assemblies in both new and retrofit construction. It seals out smoke, toxic gas and water, plus it provides a seal to stop sound and dust infiltration. There are two components to the system: FS-90 setting compound and fiberglass insulation backing. The setting compound comes in powder form so you only mix what you need, wasting less product, and it is tinted reddish-pink for easy jobsite identification. It also costs less than many comparative products in the market. It is a product you should specify if you have not already.

So remember, if you have questions about complex fire-rated assemblies, check out The Purple Book. And you can specify FS-90 setting compound with confidence for rated through-wall penetrations. Of course, for details about any products or questions about specifying them, you can always contact your construction design manager. We are here to help you design better.