

# FIRESTOPPING

**FIRESTOPPING** is "the use of specialty materials in fire-rated barriers to re-establish the integrity of the barrier, thus preventing fire and smoke passing through the barrier."

Fire-rated walls and floors are built or put in place inside buildings for the purpose of stopping or containing the spread of fire and toxic smoke. These barriers only work when they are solid and have no openings that allow the spread of fire.

## SELECTING FIRESTOP MATERIAL

When selecting a firestop material. **MAKE SURE THE MATERIAL IS INTENDED FOR FIRESTOPPING PURPOSES.** The use of non-firestop rated materials to seal openings and "fill in" air spaces may be more harmful than nothing at all. These non-firestop rated materials may be flammable and also may give off highly toxic gases.

### Function

Firestop materials must be clearly labeled and rated for firestop use and be able to:

- Meet the appropriate Hour Rating
- Resist high heat
- Resist heat conductivity
- Withstand rapid cooling and erosive impact of a hose stream
- Withstand turbulence of fire

### Application

Firestop materials also must be chosen based on application:

- Wall or Floor construction
- Hourly Rating required
- Opening size
- Annular space between the opening and the penetrating item, (i.e., pipe, conduit, duct, etc.)

**IMPORTANT - Install the materials according to the manufacturer-tested method.**

## RATING FIRESTOPS

Firestop materials are tested under furnace conditions and evaluated under ASTM E 814 in two classifications:

**F-Rating:** An "F" (for fire exposure) rating, in full hours, indicates that the test assembly withstood the standard fire exposure without penetration of flame or spontaneous ignition on the unexposed side, for the indicated period and also indicates that there was no passage of water to the unexposed side during the hose stream test.

**T-Rating:** A "T" (for temperature) rating, in full or fractional hours, indicates that no temperature on the unexposed side increased over ambient by more than 325 degrees F for the indicated period. Measurements include the penetrating item as well as the firestop seal itself. The T-rating can be 0, but can never exceed the F-rating.

## CATEGORIES OF FIRESTOPS

**Mechanical:** Mechanical systems are pre-made and shaped to fit the size of penetration opening.

**Non-Mechanical:** Non-Mechanical systems consist of various of:  
Putties, Caulks, Pillows, Composite Sheets, Cementitious (cement like) Compound and and Wrap Strips.