# Prevention of Toxic Smoke through "T" ratings

By Brian Schroeder, Technical Department ProVent Systems

## How the T-Rite drain works

The T-Rite Drain patent pending device has an oversized metal extension that attaches to a floor/shower drain base and extends down into the fire zone. The open area around the pipe allows the heat to quickly soften the plastic pipe (in 3 minutes) and accelerate the sealing from the Intumescent material (in 4 minutes). This unique feature seals the plastic pipe before any occurrence of flaming (in 5 minutes) and prevents temperature rise to the unexposed side. The entire metal extension device becomes tightly filled with a solid char (in 7 minutes).

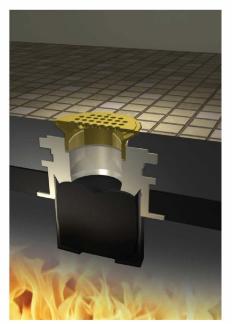
## figure 2: Shows the T-Rite drain having both a 2 hour F and T rating



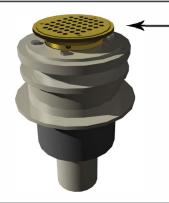
**3 minutes** into the fire test: the plastic softens and the intumescent starts to accelerate its size.



**5 minutes** into the fire test: the intumescent material closes and seals off the plastic pipe before any occurrence of smoke transmission.



**7 minutes** into the fire test: the metal extension becomes completely filled with char. Achived a 2 hour F and T-raing.



### The T-Rite drain base will fit all other manufacturers' strainer tops

#### For Building Inspectors and Plumbing Engineers:

IBC Sec. 712.4.1.2 & UBC Sec 710.2.3 Building Code

States: All through penetrations that are not located inside a wall cavity must have both an F-rating and a T-rating of not less than 1 hour but not less than the rating of the floor penetrated.

T-Rite Drains comply with the 2 Hour F & T rating requirements.