

**Topic: TREMstop IA (Intumescent Acrylic): A Two-Stage Intumescent Solution**

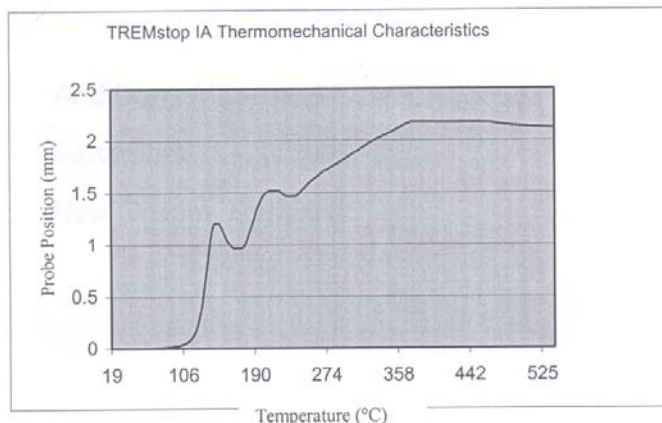
**Release Date: March 30, 2003**

**For more information, contact the Technical Service Department at 866-209-2404.**

It is well documented in the industry that fire-stopping products are important to saving lives. As a result, Tremco's research and development group has spent a significant amount of time analyzing and testing different chemicals and compositions to develop the most technically advanced product in the market. Our goal was to supply material with the most efficient mechanism to seal voids in through penetrations and joints during the propagation of a fire.

Tremco's TREMstop IA (Intumescent Acrylic) has been developed with this optimum performance in mind. This product was designed to be one of the most efficient intumescent materials found in the industry today with its proprietary two stage intumescent characteristics.

Why two stages? Our research has shown that when a fire starts, a two stage intumescent material is important in stopping the propagation of smoke throughout the building. This research indicated that optimally the first stage should occur at approximately 100 °C to seal small openings, followed by a second stage around 210 °C to fill the void left from melting plastic pipe. Using a Perkin Elmer TMA-7 dilatometer cell, our research and development group optimized our proprietary formulation to meet the criteria and produced the two stage thermo mechanical characteristics shown in the graph below.



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In viewing this graph it can be seen that the first intumescent stage of the TREMstop IA (Intumescent Acrylic) kicks in at approximately 100 °C from proprietary chemical additives in our formulation. The second stage kicks in at about 210 °C from the intercalated flakes of expandable graphite in the formulation. Beyond this point, the material begins to form a micro cellular foamed char to provide excellent insulation properties to protect the unexposed side of a fire-rated wall.

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