Patent Overview

Firezone Fumetight Seal – Patent # 8,225,553

Key Features

• The invention is a fumetight gasket capable of fireproofing/sealing a doorway in the event of a fire.
• Current gaskets tend to be very rigid and difficult to install due to irregularities that exist in the bulkhead in which the frame is installed.
• The gasket comprises an elongated member having a substantially D-shaped cross section for mounting to a substantially U-shaped gasket retainer in a door frame.
  - The elongated member has a substantially D-shaped outer core that of silicone rubber.
• The fumetight gasket also includes an inner core within the substantially D-shaped outer core.
  - The inner core comprises an intumescent material for filling doorway voids during fires when the inner core is exposed by the deterioration of the outer core.

Technical Information

• Dimensions of the fumetight gasket
  - Height from the flat back side to the top of the front side is approximately 0.75 inches long
  - The side portions are approximately 0.50 inches long
  - The inner core has a diameter of approximately 0.5 inches long
• Material Selection
  - Inner core comprises a material selected from the group comprising graphite, mica, perlite, vermiculite, hydrated sodium silicate, phosphorus, and combinations thereof to allow for up to 400% expansion of the intumescent material if the intumescent material is exposed when the silicone rubber outer core deteriorates due to fire exposure.