

NATIONAL FIRE PROTECTION ASSOCIATION

The National Fire Protection Association (NFPA) is a non-profit organization composed primarily of individuals dedicated to fire safety, i.e. fire marshals, inspectors, etc. The organization sets standards and disseminates information relating to all aspects of fire safety. They have issued several test methods and standards that pertain to insulation products offered by Nomaco.

NFPA 255 (Building Materials, Test of Surface Burning Characteristics), is identical to ASTM E84. NFPA follows changes made to ASTM E84. (For more information see Technical Bulletin TS 4 Insulation Products Fire Performance Test Methods).

NFPA 90A (Standard for the Installation of Air Condition and Ventilating Systems), deals with the use of materials associated with ducts, plenums and other air handling units, including insulation in or on ducts. Section 2-3.3 (Supplementary Materials for Air Distribution Systems) of the specification relates to insulation materials.

Section: 2-3.3.1 states "Supplementary materials such as duct coverings, duct linings, vapor barrier facings, adhesives, fasteners, tapes, and core materials added to air ducts, plenums, panels, and duct silencers used in duct systems shall have a flame spread rating not over 25 without evidence of continued progressive combustion and a smoke developed rating no higher than 50."

Section: 2-3.3.2 states "Air duct, panel, and plenum coverings and liners shall not flame, glow, smolder, or smoke when tested in accordance with similar test for pipe covering. ASTM C411, Standard Test Method for Hot Surface Performance of High Temperature Thermal Insulation, at the temperature to which they are exposed in service. In no case shall the test temperature be below 250°F (121°C).

In later sections the standard goes into more detail regarding materials specifically used as pipe insulation and coverings (Section 2-3.3.6) where reference is made to Sections 2-3.3.1 and 2-3.3.2.

Based on Sections 2-3.3.1 and 2-3.3.2 Nomaco polyethylene insulation products meet the requirements of NFPA 90A at 1" thickness and below. Elastomeric insulation products meet this requirement at 1-1/2" thickness and below. The reference to ASTM C411 states that the material "shall not flame, glow, smolder, or smoke" during a 250°F test. Note: Materials based on polyolefin resins would collapse and melt, but would not flame, glow, smolder or smoke. NFPA reviews materials from a fire hazard standpoint, thus the reason for these specific requirements.

NFPA 90B

Nomaco polyethylene insulation products meet the requirements of NFPA 90B which requires a 25/50 flame spread/smoke development rating when tested according to ASTM E 84 at 1" thickness and below and elastomeric insulation products at 1-1/2" thickness and below.