

What are ASHRAE 90.1 and NFPA 285 and how should they be specified

The purpose of this document is to explain what Standard ASHRAE 90.1 and Test Method NFPA 285 are and how they should be specified to have the air barrier system meet the 2012 IECC and IBC code requirements.

ASHRAE 90.1 was introduced into the commercial provisions of the 2012 IECC, published by ICC. This requires that the building envelope be designed to limit uncontrolled air leakage. This requires using materials that exhibit an air permeance less than 0.004 cfm/ft² when tested in accordance with ASTM E2178 or assemblies that have been tested and have an air leakage of less than 0.04 cfm/ft² when tested in accordance with ASTM E283, E2357, E1680, or E1677

In order to meet ASHRAE 90.1, the specifier should select Air Barrier materials or an assembly that have been tested to have a compliant air permeability as measured to ASTM E2178. These materials also must be compatible and connected to the roof and floor Air Barrier systems to ensure the total building envelope limits uncontrolled air leakage.

NFPA 285 was developed to determine the vertical and lateral flame propagation characteristics on exterior non-loadbearing wall assemblies that contain combustible components and are intended to be installed on buildings of Type I, II, III, or IV construction. Due to changes in Chapter 14 of the 2012 IBC Code on Exterior Walls, combustible Air Barrier systems are now required to be tested as part of the complete wall assembly system to verify the Air Barrier system does not pose a threat to fire propagation on exteriors of commercial buildings.

In order to meet the NFPA 285 requirement, the specifier would either need to select a system assembly that has been tested and approved, or he would need to select materials that have been tested in accordance with NFPA 285 where the system is reviewed by an engineer knowledgeable in fire characteristics of building materials that can determine if a combination of materials in an assembly would test successfully in accordance with NFPA 285 should a test be performed.

Tremco has multiple NFPA 285 tested assemblies listed with Underwriter's Laboratories incorporating our ExoAir 230 Air Barrier system with Proglaze ETA, Tremflex 834, and Spectrem 1 silicone sealant as well as various claddings and insulation types. These systems meet both ASHRAE 90.1 as well as NFPA 285. For more information on Tremco tested systems, please go to [UL Listing of Tremco Air Barrier Assemblies tested to NFPA 285](#). Place "Tremco" in the Company Name field and "FWFO" in the UL Category code field and then click on the search button to bring up a list of all the UL tested assemblies by Tremco.

When specifying your Air Barrier system, be sure to clarify that NFPA 285 must be an assembly of tested materials, not a single material.

Please contact Tremco Technical Service at 866-209-2404 with any questions regarding this bulletin.