About NFPA 285 Assemblies

BACKGROUND

The National Fire Protection Association (NFPA) 285 fire test evaluates fire propagation characteristics of exterior wall assemblies that incorporate combustible claddings such as High-Pressure Laminates (HPL), Metal Composite Materials (MCM) and claddings such as Exterior Insulation and Finish Systems (EIFS) with Drainage that are or sometimes include combustible components such as foam plastic insulation or water resistive barriers. The International Building Code (IBC) and local codes such as the New York City Building Code require compliance with NFPA 285 for certain building types, materials, and conditions. NFPA 285 compliance is typically required when an exterior wall assembly contains a combustible cladding or components and the building classified as Type I, II, III, or IV (non-combustible) construction, with a few exceptions.

ABOUT THE NFPA 285 TEST APPARATUS AND ASSEMBLY

The test apparatus simulates a typical multi-story building including first and second floor rooms, window opening, floor and roof slabs. The complete exterior wall assembly (drywall, framing, sheathing, insulation, air/water resistive barrier, cladding, etc.) to be evaluated is mounted to the face of the test apparatus. The construction methods and details including openings, floor lines, etc. are representative of the exterior wall assembly.

ABOUT THE NFPA 285 TEST PROTOCOL

The NPFA 285 test starts with a fire in the first floor room which results in flashover through the first floor window opening, The following conditions are evaluated during the 30 minute fire exposure:

- Ability of the wall assembly to resist flame propagation over the exterior face of the wall assembly
- Ability of the wall assembly to resist vertical flame propagation within the combustible components from one story to the next
- Ability of the wall assembly to resist vertical flame propagation over the interior surface of the wall assembly from one story to the next
- Ability of the wall assembly to resist lateral flame propagation from the compartment of fire origin to adjacent compartments or spaces

The results, which are based on instrumentation that records temperature data at multiple locations throughout the assembly and visual observations by laboratory personnel are applicable to the complete wall assembly as constructed. Engineering judgements are sometimes conducted to qualify alternative components or construction methods provided they are deemed to provide equivalent performance to the tested assembly.

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SOURCES FOR NFPA 285 TESTED ASSEMBLIES

Combustible components in exterior wall assemblies commonly include products such as air/water resistive barriers along with certain types of insulation and claddings. For purposes of design, construction and building code compliance, the construction team needs sources for assemblies that meet the requirements of NFPA 285 and options that can suit the needs of a project. Below are common sources for NFPA 285 compliant assemblies:

Third Party Databases/Directories
Similar to databases/directories that exist for fire resistive assemblies, some third-party test and quality control agencies publish NFPA 285 assemblies in databases that are searchable by key words, components, manufacturer, etc.

Construction Product Manufacturers
Construction product manufacturers are a good source to locate NFPA 285 compliant assemblies since testing is typically conducted on their behalf. Some manufacturers publish results in tables or selection guides with a menu of product options that result in NFPA 285 compliant wall assemblies.

Building Code Evaluation Service Reports or Listings
Building code evaluation services may have searchable databases with fields for product manufacturers with evaluation reports or listings that include NFPA 285 compliant assemblies.

ABOUT EIMA

Founded in 1981, the EIFS Industry Members Association (EIMA) is a North American non-profit technical trade association dedicated to advancing and promoting the Exterior Insulation and Finish Systems (EIFS) industry. As a leading authority on EIFS, EIMA serves as a vital hub for leading suppliers, manufacturers, distributors, contractors, architects, and professionals in the industry. EIMA stands as a cornerstone for individuals and businesses seeking to thrive in the dynamic world of EIFS. Learn more at www.eima.com.

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The requirements of each project are unique and must be independently evaluated and verified by qualified design and construction professionals to ensure that the design is suitable for its intended purpose and complies with all applicable building codes, standards, and legal requirements. Materials, systems, and methods of installation may vary based on specific project conditions, individual EIFS manufacturer recommendations, local building code requirements, environmental and design conditions, or other applicable legal or regulatory obligations.

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