

Building Code Requirements.



Building codes are established to provide structural, fire, and life safety requirement for all buildings. Building codes have specific requirements for materials, insulation, structural, and fire performance.

The International Building Code (IBC) has detailed requirements for all materials used in building construction, including R-Shield® insulation which is classified as a “foam plastic”.

Foam plastics must meet the requirements of Chapter 26 of the IBC. The basic requirements contained in Sections 2603.2 through 2603.4 are:

- Labeling and identification by an approved agency
- Surface-burning characteristics in accordance with ASTM E84
- Separation from the interior of the building by 1/2 inch gypsum board

The IBC has additional requirements for the materials used on buildings classified as Type I, II, III, or IV.

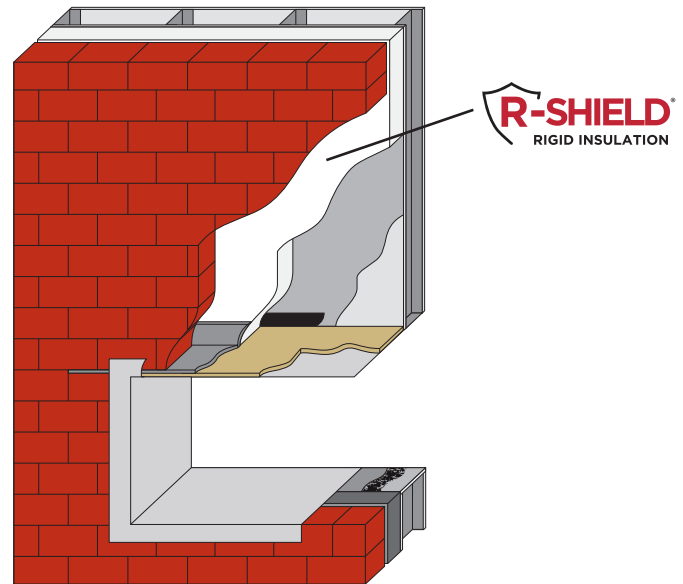
Exterior walls of Type I, II, III, and IV buildings are required to be constructed with noncombustible materials. However, the IBC provides for the use of foam plastic insulation in exterior walls when the requirements of Chapter 26 are met. In addition to the three requirements listed above, combustible materials in exterior wall assemblies are required to be tested in accordance with and comply with the acceptance criteria of NFPA 285. There is an exception to the NFPA 285 testing requirement for one-story Type I, II, III, or IV buildings.

NFPA 285, “Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components”.



A key aspect of NFPA 285 is the evaluation of a complete wall assembly and not individual materials.

The purpose of NFPA 285 is to evaluate the ability of a wall assembly to resist flame propagation. The NFPA 285 test is conducted on a complete two story wall assembly that incorporates a window on the first floor



NFPA 285 Assemblies.

R-Shield has a number of options for NFPA 285 Compliance Assemblies:

- Assemblies incorporating a wide range of exterior claddings, air barriers, and R-Shield insulation cavity insulation. Please consult the R-Shield NFPA 285 Assembly literature for complete information.
- Assemblies incorporating a range of claddings with R-Shield insulation cavity insulation and ExoAir® 230 weather-resistive barrier. Please consult the UL Certification Directory for UL System No. EWS0011.
- Assemblies incorporating brick cladding with R-Shield insulation cavity insulation. Please consult the UL Certification Directory for UL Systems No.:

EWS0001

EWS0002

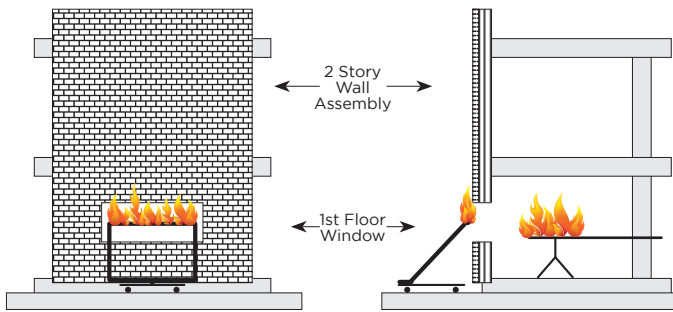
EWS0003

EWS0016

EWS0017

EWS0018

- R-Shield insulation is commonly used as a component of proprietary exterior insulation and finish system (EIFS). Please contact the EIFS manufacturer for information regarding their NFPA 285 compliance assemblies.



NFPA 285 Basics.

The National Fire Protection Association (NFPA) is a nonprofit association with a mission to reduce the burden of fire and other hazards on life. The mission includes advocating for consensus fire test methods. One such consensus standard is NFPA 285, “Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components”.

The purpose of NFPA 285 is to evaluate the ability of the wall assembly to resist:

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

The NFPA 285 test is conducted on a complete wall assembly and not on individual component materials. The results are specific to the assembly tested and the substitution of an alternate material must be evaluated by an additional test or appropriate analysis by a fire protection engineer.

Proven to meet, or exceed, building codes.

R-Shield is manufactured under an industry leading quality control program monitored by UL and further recognized in UL Evaluation Report UL ER40361-01 and ICC ESR-4743. R-Shield meets ASTM C578, “Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation”.



Ready to take control? Start here.

If you’re ready to have R-Shield contribute to your next project, just contact your Premier Building Systems Technical Sales Representative. They will be happy to give you design consultation, information about R-Shield products, pricing, and answers to all of your questions.