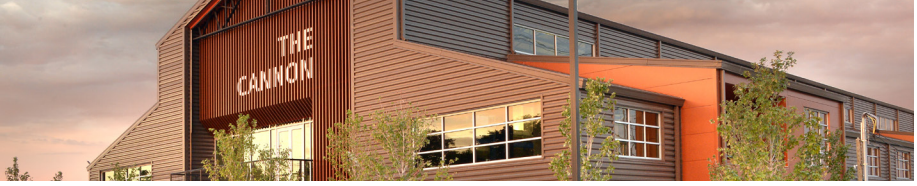


METL SPAN
a NUCOR company

THE IMPORTANCE OF BUILDING FIRE SAFETY

NFPA 285-19 COMPLIANCE

NFPA 285-19 REQUIREMENTS

The latest edition of the International Building Code (IBC 2021) requires that the 2019 edition of NFPA 285 now be used to evaluate exterior wall assemblies containing combustible components. A significant technical change to NFPA 285-19 from previous editions is the required inclusion and specified location of horizontal and vertical "joints and seams" in the exterior veneer of the wall assembly in relation to the test assembly opening (NFPA 285-19 section 5.7.2). This change represents a more demanding assembly design intended to position wall cladding joints in critical locations such that the potential for horizontal and vertical flame spread and temperature rise is maximized.

WHAT DOES THIS MEAN FOR PROJECT DESIGNERS OR SPECIFIERS?

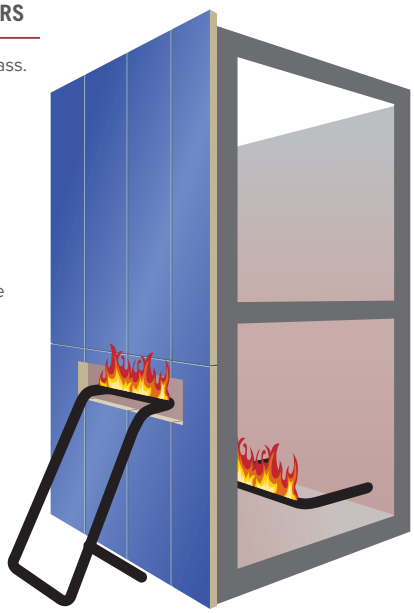
Most construction materials are sold in panel form, meaning they have a finite length and width to facilitate handling and installation. The joinery where two panels meet is often the fastener location. In the event of a fire, these panel joints (along with the air space typically required behind many rainscreen-type façade elements) can act as openings through which hot combustion gases may enter the concealed cavity and propagate combustion of materials located there (rigid foam insulation, weather-resistive barrier, the panel itself, etc.).

NFPA 285-19 PASS/FAIL TEST PARAMETERS

All three parameters must be met in order to pass.

1. No flame propagation to the interior of the second story
2. Flame may not reach 10' above the top of the window opening or 5' laterally from the opening centerline in either direction
3. Thermocouples located throughout the assembly must not exceed designated temperatures

NFPA 285 requires at least one vertical joint placed above the opening within 12" of the opening centerline, and at least one horizontal joint located within the first story between 1' and 3' above the window head.



Insulated metal panels are not typically installed with such a drained or vented cavity behind the panel, but panel sidejoints, as well as vertical and/or horizontal construction joints between panel ends, are all areas where the panel's foam core may be concealed from view but otherwise more exposed to these same combustion gases. The NFPA 285-19 standard requirement to place these joints in critical areas provides an added level of assurance that the products that you specify will meet the code's intent to provide occupant safety and limit fire spread.

Any assembly claiming to be compliant with NFPA 285-19 should exhibit typical construction joints and seams, both horizontal AND vertical, in at least the outermost component of the wall, even if that component itself is noncombustible.

TESTING & CODE COMPLIANCE

Metl-Span has successfully passed NFPA 285-19 testing with its vertical CF Wall and horizontal CF Architectural panels, incorporating the required joints into the test assembly at the locations specified in the standard. Additionally, the panels tested exhibited the "worst case" attributes of maximum panel thickness, minimum width, and minimum exterior/interior face gauges, thereby qualifying all Metl-Span CF insulated metal panels as compliant with NFPA 285-19. This testing is supported by Intertek Design Listing MSN/CWP 30-01 and ICC Evaluation Services ESR-2218.

By completing testing to the NFPA 285-19 Standard, Metl-Span is prepared today to show compliance with the fire testing requirements of IBC 2021 when states and localities begin to adopt this edition of the code in the near future.

CONTACT METL-SPAN FOR MORE INFORMATION.

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