

# NFPA 285 Test Summary



**Date of Test:** April 24, 1014

**Test Agency:** Southwest Research Institute  
6220 Culebra Road, San Antonio, TX 78238-5166

SwRI Project No. 01.19577.01.608

**Test Method:** National Fire Protection Association (NFPA) 285 - 2012 Edition - *Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Nonload-Bearing Wall Assemblies Containing Combustible Components*

**Test Specimens:** Nichiha Architectural Wall Panels (EX Series), JEL777 Panel Clips, 10mm Spacer, Single Flange Sealant Backer, Starter Track T300, Vertical Panel Starter Track

**Specimen Specs/ Wall Assembly Description:** Full size Nichiha Architectural Wall Panels, 18" x 6' x 5/8" (455mm x 1,818mm x 16mm), and reduced panels, cut at terminations, were installed via Nichiha attachment hardware - starter track and panel clips fastened to 18 gauge, 3-5/8" C-channel steel studs, spaced 16" on center. Steel framing was sheathed on the interior with 5/8" Type X gypsum and on the exterior side with 1/2" Densglass Gold Sheathing. Stud wall cavities were lined with 4" thick, 4-pct, mineral wool insulation. The exterior sheathing was covered with a layer of Tyvek Commercial Wrap. The two-story assembly included a 78" x 30" window opening. Panels were face fastened over 10mm Spacer at window head and sill and at the top of the wall. The Vertical Panel Starter Track was used at the window header, installed over 10mm Spacer prior to panel installation.

**Test Procedure:** Test conducted in accordance with NFPA 285 standard, with matrix of temperature measurement devices recording data throughout the assembly, including, but not limited to, the panels' surface, the air cavity between the back of the panels and face of the Densglass sheathing, and burn room ceiling. The test was comprised of three parts with a total duration of 40 minutes, including a 10-minute observation period at the end. The burn room burners acted alone for the first five minutes. Next, a window burner was placed to provide flame exposure directly to the assembly exterior face, and the test continued for 25 minutes until the burners were deactivated and the 10-minute observation period began.

**Test Results:** The wall assembly **met** the acceptance criteria given in the NFPA 285 standard.

- No vertical flame propagation to 10 feet above the top of the window.
- No lateral flame propagation to 5 feet from the centerline of the window.
- Surface temperature readings did not exceed 1000° F at any time.
- Temperatures in the air cavity did not exceed 1000° F at any time.
- Flame propagation did not occur in the second floor test room at any time, nor did temperatures exceed 500° F at any time.