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Testing, calibrating, advising

## ASTM E 84 Surface Burning Characteristics of "Austin Fire Fighter, Lincoln Fire Fighter, Platinum Plus Fire Fighter & Kingsa FR" 12 mm FR Plywood

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4 Pages

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**ACCREDITATION** To ISO/IEC 17025 for a defined Scope of Testing by the International Accreditation Service

### **SPECIFICATIONS OF ORDER**

Determine the Flame Spread and Smoke Developed Indices based upon a single test conducted in accordance with ASTM E 84-16, as per Exova Metallurgical Services reference Purchase Order No. POI-003386-V1 dated December 12, 2016.

### **SAMPLE IDENTIFICATION**

(Exova sample identification number 16-002-S0728)

Plywood panel, approximately 0.47 inches (12 mm) in thickness, described as, "12 mm Fire Retardant Plywood; Batch No: 01/12/2016; Date of Mfg: 01/12/2016", identified as:  
"Austin Fire Fighter, Lincoln Fire Fighter, Platinum Plus Fire Fighter & Kingsa FR"

### **TEST PROCEDURE**

The method, designated as ASTM E 84-16 "Standard Method of Test for Surface Burning Characteristics of Building Materials", is designed to determine the relative surface burning characteristics of materials under specific test conditions. Results are expressed in terms of Flame Spread Index (FSI) and Smoke Developed Index (SDI).

Although the procedure is applicable to materials, products and assemblies used in building construction for development of comparative surface spread of flame data, the test results may not reflect the relative surface burning characteristics of tested materials under all building fire conditions.

### **SAMPLE PREPARATION**

The test specimen consisted of a total of 6 sections of material, each approximately 21 inches (533 mm) in width by 48 inches (1219 mm) in length. The sections were butted together to create the requisite specimen length. Prior to testing, the specimen was conditioned to constant weight at a temperature of  $73 \pm 5^\circ\text{F}$  ( $23 \pm 3^\circ\text{C}$ ) and a relative humidity of  $50 \pm 5\%$ . During testing, the specimen was self-supporting.

The testing was performed on: 2017-01-04

### **SUMMARY OF TEST PROCEDURE**

The tunnel is preheated to  $150 \pm 5^\circ\text{F}$  ( $66 \pm 2.8^\circ\text{C}$ ), as measured by the floor-embedded thermocouple located 23.25 feet (7087 mm) downstream of the burner ports, and allowed to cool to  $105 \pm 5^\circ\text{F}$  ( $40.5 \pm 2.8^\circ\text{C}$ ), as measured by the floor-embedded thermocouple located 13 feet (3962 mm) from the burners. At this time the tunnel lid is raised and the test sample is placed along the ledges of the tunnel so as to form a continuous ceiling 24 feet (7315 mm) long, 12 inches (305 mm) above the floor. Three 8 foot (2438 mm) sections of 0.25 inch (6 mm) cement board are then placed on the back side of the sample end-to-end, to protect the tunnel lid, and the lid is then lowered into place.

