



## STORAGE OF COMPLETED TEST DECKS:

All test deck assemblies were stored indoors at temperatures not lower than 60°F (16°C) nor higher than 90°F (32°C) for the period of time necessary to cure the assembly components prior to testing. Test decks were stored such that each was surrounded by free circulating air.

### A. Roof System and Test Deck Assembly Construction Details

The test decks were built with the following construction details and in accordance with the ASTM E108-11 specifications for deck construction.

Lumber: Nominal 2" x 4" Douglas Fir, moisture content between 8-12%.  
Deck: 15/32" AC Exterior grade plywood, moisture content not greater than 8%.  
Underlayment: A single layer of the sampled Polypropylene Roof Underlayment was fastened to the substrate using T50 flat head staples at 18" intervals and incorporated a 2" overlap.  
Roof Covering: GAF Royal Sovereign® 3 tab shingles were fastened to the deck using four 1 ¼" galvanized roofing nails per shingle. A starter course was cut from the upper portion of a shingle and placed along the leading edge. Each course was overlapped to leave 5 ½" exposure and fastened at 6 ½" above the leading edge of the shingle.

### B. Test Results

#### 1. Burning Brand Test – Class A (Four Test Decks)

Wind Velocity: 1056 ft/min ± 44 ft/min  
Test Deck Slope: 5" per Horizontal Foot  
Class A Brands: Size: 12" x 12" x 2" (one per test deck)

**Observations:** All four test decks performed in a similar manner. The brands were placed on the deck following the flame application schedule as outlined in section 10.4.2. Brands were placed at the location considered most vulnerable which was determined to be centered over the horizontal joint. At approximately 45 minutes the tests were concluded. At no time during the test was there any evidence of flaming on the underside of the test decks, neither did any glowing embers fall from the deck assembly.

| Burning Brand Details |          |                    |                 |           |
|-----------------------|----------|--------------------|-----------------|-----------|
| Test Assembly         | Ignition | Brand Extinguished | Test Terminated | Pass/Fail |
| 1                     | 1:36     | 24:41              | 58:45           | Pass      |
| 2                     | 2:10     | 27:13              | 41:55           | Pass      |
| 3                     | 1:46     | 23:37              | 50:20           | Pass      |
| 4                     | 2:40     | 24:57              | 43:55           | Pass      |

**Results:** The sampled test decks **Passed** the **Class A Burning Brand Test** requirements of ASTM E108-11.