

# ICC-ES TEST REPORT

**ASTM E84-24**

**RENDERED TO: NanYa Plastics Corp. USA**  
8989 N Loop E  
Houston, TX 77029

**PRODUCT: *Phenolic Foam Core Panel***



**Report No.:** NYPC083024-47  
**Test Date(s):** 11/19/2024  
**Report Date:** 11/20/2024  
**Pages:** 13

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## 1.0 General Information

### 1.1 Product

Phenolic Foam Core Panel

### 1.2 Project Summary

ICC-ES was contracted by NanYa Plastics Corp. USA to evaluate Phenolic Foam Core Panel in accordance with ASTM E84-24. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at ICC-ES's facility in Bryan, TX.

### 1.3 Product Description

ASTM E84-24

|                                  |  |
|----------------------------------|--|
| <b>Product Name:</b>             | <b>Phenolic Foam Core Panel</b>  |
| <b>Product type:</b>             | <b>Foam</b>  |
| <b>Product Use:</b>              | <b>Interior</b>  |
| <b>Model Name/Sample Number:</b> | <b>Sample Project: S39F919-5</b>   |
| <b>Sample Description:</b>       | <b>(3) 2-3/4-in x 24-in x 86-3/4-in<br/>(1) 2-3/4-in x 24-in x 36-in</b> |
| <b>Color:</b>                    | <b>Orange</b>  |
| <b>Sample Length:</b>            | <b>288-in</b>  |
| <b>Sample Width:</b>             | <b>24-in</b>   |
| <b>Thickness:</b>                | <b>2-3/4-in</b>  |
| <b>Total Weight:</b>             | <b>111.7 lbs.</b>  |
| <b>Sample Received Date:</b>     | <b>10/24/2024</b>  |
| <b>Days in Conditioning:</b>     | <b>26</b>  |

### 1.4 Qualifications

ICC-ES in Bryan, TX has demonstrated compliance with ISO/IEC 17025 and is consequently accredited as a Testing Laboratory. ICC-ES is accredited to perform all testing reported herein.

### 1.5 Product Sampling

All materials were marked with a project number and a sample date October 10<sup>th</sup>, 2024, as an indication that they were selected by PHAN THI ANH. All test specimens were supplied by NanYa Plastics Corp. USA and were marked as indicated. See photograph in B for typical sampling mark.  
Sample Project: S39F919-5

## 1.6 Witnessing

Todd Pack, a representative of NanYa Plastics Corp. USA witnessed the testing reported herein.

## 1.7 Conditions of Testing

Unless otherwise indicated, all testing reported herein was conducted in a laboratory set to maintain temperature in the range of 65-80°F and humidity in the range of 45-60% RH. All test specimen materials were stored in the laboratory conditioning room of  $73.4 \pm 5^\circ\text{F}$  and at a relative humidity of  $50 \pm 5\%$  environment for no less than 24 hours prior to testing. The test specimens were conditioned for **26 days** and obtained steady state.

## 2.0 Referenced Standards

ASTM E84-24 Standard Test Method for Surface Burning Characteristics of Building Materials.

## 3.0 Summary of Results

**Flame Spread Index – 0**

**Smoke Developed Index – 145**

## 3.1 General

This fire-test–response standard for the comparative surface burning behavior of building materials is applicable to exposed surfaces such as walls and ceilings. This standard is used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled conditions, but does not by itself incorporate all factors required for fire-hazard or fire-risk assessment of the materials, products, or assemblies under actual fire conditions.

## 3.2 Test Specimens

The samples submitted by the manufacturer was identified as Phenolic Foam Core Panel and was supplied in the form of (4) 2-3/4-in x 24-in x 86-3/4-in. They were received without damage.

### 3.3 Test Setup and Procedure

The product(s) were setup and evaluated in accordance with ASTM E84-24.

|   |  |
|---|--|
| <b>Substrate Used:</b>                                    | <b>N/A</b>   |
| <b>Mounting Method:</b>                                   | <b>Standard</b>  |
| <b>Support Used:</b>                                      | <b>N/A</b>   |
| <b>Side Exposed:</b>                                      | <b>Foam Side</b>   |
| <b>Adhesive Used &amp; Coverage Rate (if Applicable):</b> | <b>N/A</b>   |
| <b>Cement Board Used to Cover Sample (Y/N):</b>           | <b>Yes</b>   |
| <b>Sample Continuous or Sectioned:</b>                    | <b>Sectioned</b>   |
| <b>No. &amp; Size of Sections:</b>                        | (3) 2-3/4-in x 24-in x 86-3/4-in<br>(1) 2-3/4-in x 24-in x 36-in |
| <b>Lab Ambient Temp (°F):</b>                             | <b>71</b>  |
| <b>Lab Ambient RH (%):</b>                                | <b>57</b>  |
| <b>Date Tested:</b>                                       | <b>11/19/2024</b>  |

### 3.4 Test Results

#### TEST DATA

|                                   |         |
|-----------------------------------|---------|
| Time to Ignition (mm/ss):         | 09:59   |
| Maximum Flame Spread (ft):        | 0.000   |
| Time to Max Flame Spread (mm/ss): | 00:00   |
| Maximum Temperature (°F):         | 602     |
| Time to Max Temperature (mm/ss):  | 09:44   |
| Total Fuel Burned (cubic feet):   | 44.710  |
| Flame Spread*Time Area (ft*min):  | 0.000   |
| Smoke Area (%A*min):              | 98.044  |
| Unrounded FSI:                    | 0.000   |
| Unrounded SDI:                    | 147.355 |

#### TEST OBSERVATIONS

|       |                             |
|-------|-----------------------------|
| 00:13 | Observed discoloration      |
| 02:07 | Observed flaking on surface |
| 08:00 | Observed cracking           |

#### POST-TEST OBSERVATIONS

|            |                             |
|------------|-----------------------------|
| 0 – 8 ft   | Section was charred         |
| 8 – 16 ft  | Section was charred         |
| 16 – 24 ft | Section was lightly charred |

#### Analysis on Classification Criteria

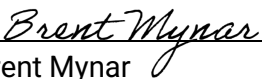
Based on Flame Spread Index and Smoke Developed Index when tested in accordance with ASTM E84 or UL 723. Three classes of interior finish are specified by the International Building Code (IBC) that describes a set of classification criteria required for interior wall and ceiling finish materials. The classification criteria for all three model codes is the same: ASTM E84 and UL 723 do not include classification criteria for the results obtained from testing.

| Class | Flame Spread Index | Smoke Developed Index |
|-------|--------------------|-----------------------|
| A     | 0-25               | 0-450                 |
| B     | 26-75              | 0-450                 |
| C     | 76-200             | 0-450                 |

#### 4.0 Closing Statement

This report contains only findings and results arrived at after employing the specific test procedures listed herein. It does not constitute a recommendation for, endorsement of, or certification of the product or material tested. Unless differently required, ICC-ES reports apply the "Simple Acceptance" rule, also called "Shared Risk approach", of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity. ICC-ES makes no warranty, expressed or implied, except that the test has been performed, and a report prepared, based upon the specimen specified by the client. Extrapolation of data, from the test data provided herein, to the batch or lot from which the specimens were obtained may not correlate and should be interpreted with extreme caution. ICC-ES assumes no responsibility for variations in quality, composition, appearance, performance, or other features of similar materials produced by the client, other persons, or under conditions over which ICC-ES has no control. ICC-ES has issued this report for the exclusive use of the client to whom it is addressed. Any use or duplication of this report shall not be made without their consent. This report shall only be reproduced in its entirety.

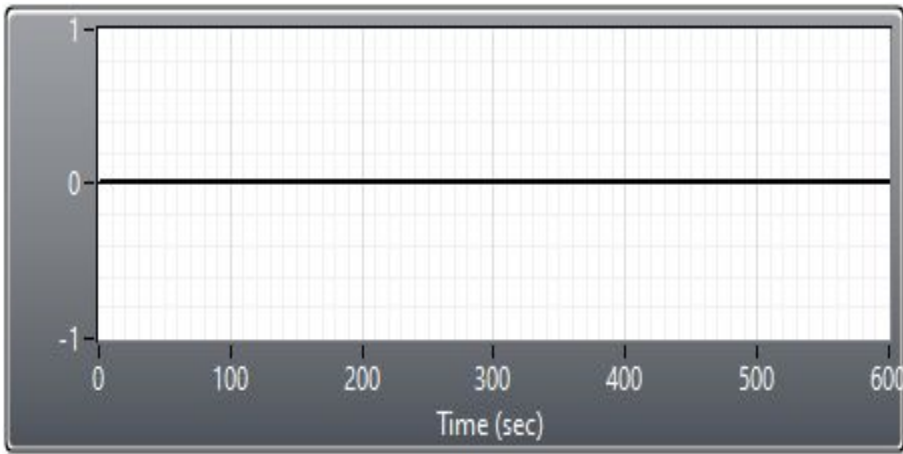
For ICC-ES, LLC:

  
\_\_\_\_\_  
Tested by: Brent Mynar 11/20/2024  
Project Manager

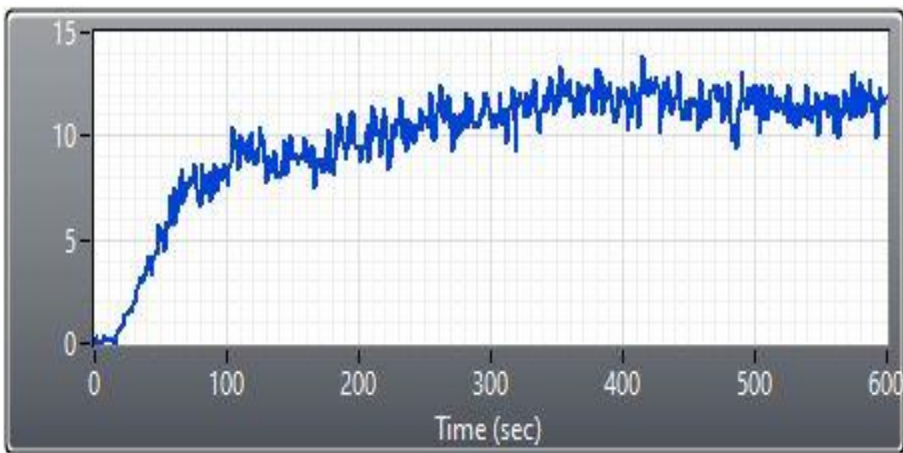
  
\_\_\_\_\_  
Reviewed by: Gabriel Parra 11/20/2024  
Project Engineer

## Appendix A - Data

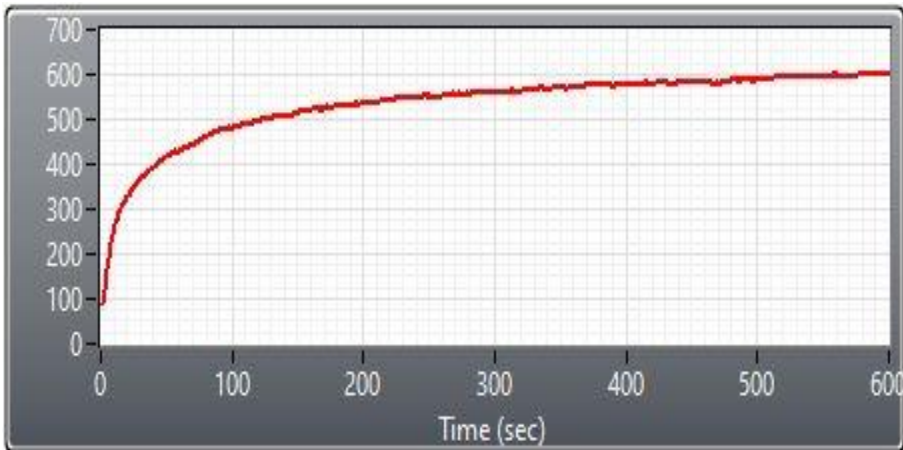
### FLAME SPREAD



### SMOKE (%A)



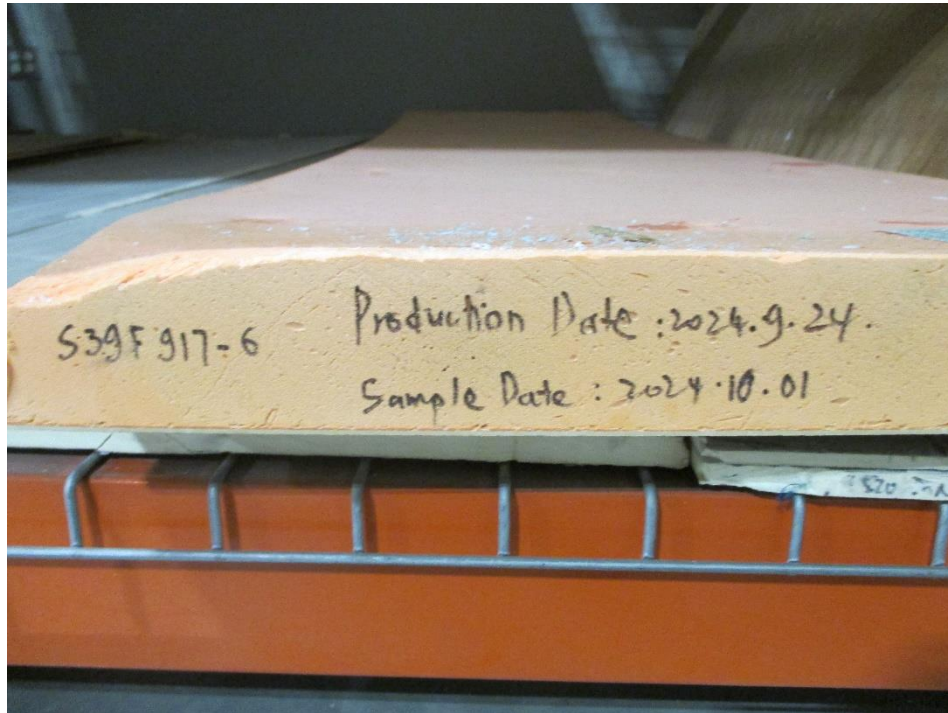
### TEMPERATURE





## Appendix B - Photographs

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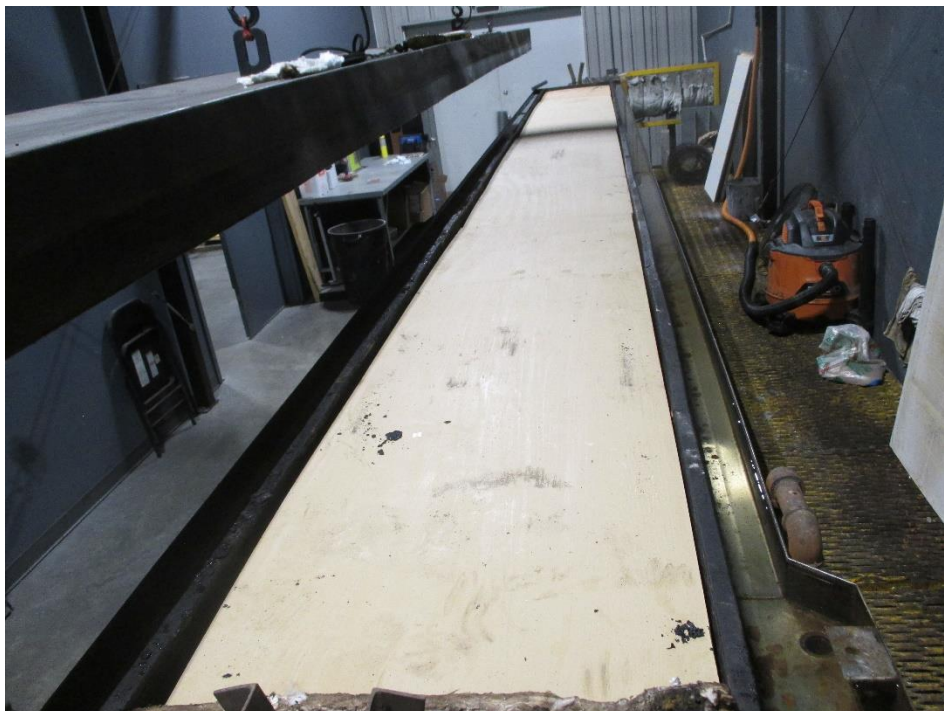
**Photo No. 1**  
**Sample Marking**



**Photo No. 2**  
**Pre-Test Exposed Side**



**Photo No. 3**  
**Pre-Test Unexposed Side**



**Photo No. 4**  
**Post-Test Unexposed Side**





**Photo No.5**  
**Post-Test Exposed Side**



**Photo No.6**  
**Post-Test Exposed Side (Continued)**

|  |                         |
|--|-------------------------|
| Manufacturer: NAN YA Plastics Corporation  |                         |
| Panel: Fire Rated Panel  | Size: 590*2200*66mm     |
| Address: No. 2, Zhongyang Industrial Park, Xingang Township, Chiayi County, Taiwan |                         |
| Product Name: Panel  | Production Line: B341   |
| Date: 2024/10/1  | Color: 3KF              |
| Shift: FA EA EB EC   | Order Number: 539F917-5 |

**Photo No.7**  
**Sample Description**

## Appendix C - Revision Log

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| Rev. # | Date       | Page(s) | Revision(s)           |
|--------|------------|---------|-----------------------|
| 0      | 11/20/2024 | N/A     | Original report issue |