| Tested For: | Novawall Systems, Inc | Phone: | (703) 461-0113 | Recelved: | 3/12/2021 |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | 5230 Elsenhower Ave | Fax: |  | Completed: | $3 / 15 / 2021$ |
|  | Alexandria, VA 22304 | Moblle: | Code: | K |  |
|  | USA | P0\#: |  | Test Report: | 3-42966-0 |
|  |  |  |  |  |  |
| Key Test: | ASTM E84 (Int Fin) |  |  |  |  |

## Client's Identification:

Product Description" Novaform 12mm PET.

TEST PERFORMED: ASTM E84-Standard Test Method for Surface Burning Characteristics of Building Materials

## REFERENCE: Comparable to: UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials

APPROXIMATE THICKNESS OF SPECIMEN (as measured by SGS North America): 0.485"

SPECIMEN WEIGHT (to include substrate when applicable):

Prior to Conditioning:
Stabilized Weight (taken twice within 24 hours):
24.9 lbs.
24.9 lbs .

## PRODUCT CATEGORY:

Textile Type ProductVinyl Type Product® Other than Textile Type or Vinyl Type Product: see client's Identification section above

BRIEF DESCRIPTION OF TEST: This test method is used to determine the relative burning behavior of a material under defined test conditions. The test is performed in a 25 ft . long tunnel/duct-like apparatus and is often referred to as the "tunnel test". The test contemplates a calibration where Red Oak burns to the 24 ft . mark in 5.5 minutes $\pm 15$ seconds. During the actual test, a 24 ft . long $\times 23^{\prime \prime}$ wide specimen rests horizontally in a ceiling configuration inside the test chamber facing downward and toward two upward oriented burners. A furnace lid that rests in a water trough seals the chamber tight. A cement board placed on the backside of each specimen assembly protects the furnace lid during the test. The near face of the specimen is subjected to a 4.5 ft . flame insult of approximately 88 kW for ten minutes. The time and distance of the spread of flame along the length of the specimen and the smoke developed as read by the photometric system are all recorded. The Flame Spread and Smoke Developed are reported as an Index.

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| :---: | :---: | :---: | :---: | :---: | :---: |
| Key Test: | ASTM E84 (Int Fin) |  |  |  |  |

## SPECIMEN MOUNTING:

Self-supporting: The test specimen was rigid enough to be self-supporting when placed into test position. No additional support was required.Adhered to IRC: The test specimen was bonded to $1 / 4^{\prime \prime}$ Inorganic Reinforced Cement (IRC) boards.Adhered to Gypsum: The test specimen was adhered to $5 / 8^{\prime \prime}$ thick Type X gypsum board.凹 Unadhered: The specimen was not adhered to any substrate. Instead, it was laid over a 2" hexagonal wire mesh screen and $1 / 4^{\prime \prime}$ rods.Other: $\qquad$

SPECIMEN LENGTH: The 24 ft . length was comprised of
Continuous unbroken 24 ft . length
$\boxtimes$ Sections:Three 8 ft . sections butted end to endThree 8 ft . sections positively joined © Other: Twelve 2 ft . sections butted end to end

## ADHESIVE (applied by SGS North America): ® No

$\square$ Yes - (specify): $\qquad$

## OBSERVATIONS:

No unusual observationsBurning Drips to Floor further qualified as: $\square$ Minor; $\square$ Moderate; $\square$ MajorDelaminationSaggingShrinkageFallout (specimen displacement from ceiling mount)
区 Other: Material melted away. Heavy fire dripping/pooling on floor all the way down the full 24 ft tunnel.

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|  |  |  |  |  |  |
| Key Test: | ASTM E84 (Int Fin) |  |  | 805 |  |

REMARKS:
$\qquad$

RESULTS:
Flame Spread Index: 10
Smoke Developed: 450

ROUNDING (Per ASTM E84 Reporting Requirements):
Flame Spread Index value has been rounded to the nearest multiple of 5 .
Smoke Developed value has been rounded to:
Raw Data Rounded
Less than 200 Nearest multiple of 5
200 or more
Nearest multiple of 50

CONCLUSION: Based on the reported Results and cited Code Classification System, the item tested is assigned a:
© Class I or A ratingClass II or B ratingClass III or C ratingFails to achieve a minimum classification thereby rendering the product unsuitable in terms of code requirementBased on product performance*, ASTM E84 is not a suitable test method for the material.

* Severe melt, drip, delamination or other behavior that destroys the continuity of the flame front such that a valid flame spread is unobtainable (See "Remarks") intervention onfy and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized atteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for a maximum of 45 days only.

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DATA SUMMARY:
Time to Ignition (minutes:seconds): 00:22
Maximum Flame Spread "Distance" (feet): 2.3 Maximum Flame Spread "Time" (seconds): 47

CODE CLASSIFICATION SYSTEM (Please see "ASTM E84 Limitations"):

| Flame Spread Index |  | Smoke Developed |
| :--- | :---: | :--- |
| Class I or A: | $0-25$ | 450 or less |
| Class II or B: | $26-75$ | 450 or less |
| Class III or C: | $76-200$ | 450 or less |

## BUILDING CODE CITATION FOR THE CLASSIFICATION SCHEME:

(1) 2015 edition, NFPA 101 Life Safety Code, para. 10.2.3.4
(2) 2015 edition, NFPA 5000 Building Construction \& Safety Code, para. 10.4.2
(3) 2018 edition, International Building Code, para. 803.1.2

LIMITATIONS OF THE ASTM E84 CLASSIFICATION SCHEME: Most building codes will accept the ASTM E84 classifications when the interior finish product is used in a sprinklered area. Certain local authorities such as NYC have more stringent requirements, i.e. Smoke Developed ranges from a maximum 25 to 100.

If the interior finish product is a textile or vinyl wall covering used in a non-sprinklered area, the NFPA 265 room corner fire test applies.

Certain products which give off excessive heat such as but not limited to cellular plastics, cellular foam (either with or without coverings as applicable), polypropylene, and high density polyethylene should be tested by NFPA 286 Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth. In SGS North America's opinion, the codes require NFPA 286 for such products, even in sprinklered areas. intervention onfy and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized atteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for a maximum of 45 days only.


CERTIFICATION: I certify that the reported results were obtained after testing specimens in accordance with the procedures and equipment/\$pecified above.


Test Engineer: Jillian Guillem


## The results contalned in thls report relate only to the item(s) tested. The test report shall not be reproduced excapt in full, without witten approval from SGS North Anterica.

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Test Method
Test Report \#
Date
Client
Operator
Details of Preparation

Observations
: ASTM E84
: 3-42966-0-K
: 3/15/2021
: Novawall Systems, Inc
: Jillian Guillem
: The test specimen was not adhered to any substrate. Instead, it was laid over a $2^{\prime \prime}$ hexagonal wire mesh screen and $1 / 4^{\prime \prime}$ rods. The 24 ft . specimen length was comprised of twelve 2 ft , sections butted end to end.
: Material melted away. Heavy fire dripping/pooling on floor all the way down the full 24 ft tunnel.

| Area Under Flame Curve (ft min) | $: 22.15$ |
| :--- | :--- |
| Raw Flame Spread Index (ft min) | $: 11.41$ |
| Rounded Flame Spread Index (ft min) | $: \mathbf{1 0}$ |
| Ignition Time | $: \mathbf{0 0 : 2 2}$ mm:ss |
| Area Under Smoke Curve (\%A min) | $: 475.21$ |
| Raw Smoke-Developed Index | $: 441.90$ |
| Rounded Smoke-Developed Index | $: 450$ |
| Total Gas Flow(L) | $: 1482.6$ |
| Total Gas Flow( $\mathrm{ft}^{\mathbf{3}}$ ) | $: 52.4$ |
| Maximum Flame Front Achieved(ft) | $: 2.3$ (@47s) |



## SGS GOVMARK



