SGS

| | | | | | |
|---|---|---|---|---|---|
| **Tested For:** | **Roman Maslej** | **Phone:** | (416) 825-9880 | **Received:** | 11/14/2023 |
| | Bodaq Finishes LLC | **Fax:** | | **Completed:** | 11/20/2023 |
| | 11593 Newland St. | **Mobile:** | | **Code:** | X |
| | Westminster, CO 80020 | **PO#:** | | **Test Report:** | 3-53775-0 |
| | USA | **Email:** | roman.m@nelcos.com | | |

**Key Test:** ASTM E84 (Int Fin) 745

**Client's Identification:**

Product Description: Bodaq Architectual Film - Pattern RM005.

Test Category: Tunnel Test Specifier: BLDG(IBC): ASTM E 84: LE 2023 V 3/23 BG PC: ME BB /dv

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): 0.008"

SPECIMEN WEIGHT (to include substrate when applicable):

| | |
|---|---|
| Prior to Conditioning: | 88.3 lbs. |
| Stabilized Weight (taken twice within 24 hours): | 87.8 lbs. |

PRODUCT CATEGORY:

- ☐ Textile Type Product
- ☒ Vinyl Type Product
- ☐ Other than Textile Type or Vinyl Type Product:

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 ± 15 seconds. During the actual test, a 24 ft. long x 23" 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.





**96 Allen Boulevard Suite D, Farmingdale, NY 11735 USA • Phone: (631) 293-8944 • Email: govmark.test.reports@sgs.com**

SGS

| | | | | | |
|---|---|---|---|---|---|
| **Tested For:** | **Roman Maslej** | **Phone:** | (416) 825-9880 | **Received:** | 11/14/2023 |
| | Bodaq Finishes LLC | **Fax:** | | **Completed:** | 11/20/2023 |
| | 11593 Newland St. | **Mobile:** | | **Code:** | X |
| | Westminster, CO 80020 | **PO#:** | | **Test Report:** | 3-53775-0 |
| | USA | **Email:** | roman.m@nelcos.com | | |

**Key Test:** ASTM E84 (Int Fin) 745

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 ¼" Inorganic Reinforced Cement (IRC) boards.
- ☐ Adhered to Gypsum: The test specimen was adhered to 5/8" thick Type X gypsum board.
- ☐ Unadhered: The specimen was not adhered to any substrate. Instead, it was laid over a 2" hexagonal wire mesh screen and ¼" rods.
- ☐ Other: _____

SPECIMEN LENGTH: The 24 ft. length was comprised of:

- ☐ Continuous unbroken 24 ft. length
- ☒ Sections:
  - ☒ Three 8 ft. sections butted end to end
  - ☐ Three 8 ft. sections positively joined
  - ☐ Four 5 ft. sections and one 4 ft. section butted end to end
  - ☐ Other: _____

ADHESIVE (applied by SGS North America):
- ☐ No
- ☒ Yes - (specify): Self-Stick

OBSERVATIONS:

- ☒ No unusual observations
- ☐ Burning Drips to Floor further qualified as: ☐ Minor; ☐ Moderate; ☐ Major
- ☐ Delamination
- ☐ Sagging
- ☐ Shrinkage
- ☐ Fallout (specimen displacement from ceiling mount)
- ☐ Other: _____

SGS

| | | | | | |
|---|---|---|---|---|---|
| **Tested For:** | **Roman Maslej** | **Phone:** | (416) 825-9880 | **Received:** | 11/14/2023 |
| | Bodaq Finishes LLC | **Fax:** | | **Completed:** | 11/20/2023 |
| | 11593 Newland St. | **Mobile:** | | **Code:** | X |
| | Westminster, CO 80020 | **PO#:** | | **Test Report:** | 3-53775-0 |
| | USA | **Email:** | roman.m@nelcos.com | | |

**Key Test:** ASTM E84 (Int Fin) 745

REMARKS:

☒ None
☐ Other: _____

RESULTS:

Flame Spread Index: 0
Smoke Developed: 0

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 rating
☐ Class II or B rating
☐ Class III or C rating
☐ Fails to achieve a minimum classification thereby rendering the product unsuitable in terms of code requirement
☐ Based 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")





**96 Allen Boulevard Suite D, Farmingdale, NY 11735 USA • Phone: (631) 293-8944 • Email: govmark.test.reports@sgs.com**

| | | | | | |
|---|---|---|---|---|---|
| **Tested For:** | **Roman Maslej** | **Phone:** | (416) 825-9880 | **Received:** | 11/14/2023 |
| | Bodaq Finishes LLC | **Fax:** | | **Completed:** | 11/20/2023 |
| | 11593 Newland St. | **Mobile:** | | **Code:** | X |
| | Westminster, CO 80020 | **PO#:** | | **Test Report:** | 3-53775-0 |
| | USA | **Email:** | roman.m@nelcos.com | | |

**Key Test:** ASTM E84 (Int Fin) 745

DATA SUMMARY:

Time to Ignition (minutes:seconds): 05:41
Maximum Flame Spread "Distance" (feet): 0.4
Maximum Flame Spread "Time" (seconds): 450

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) 2021 edition, NFPA 101 Life Safety Code, para. 10.2.3.4
(2) 2021 edition, NFPA 5000 Building Construction & Safety Code, para. 10.4.2
(3) 2021 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.





**96 Allen Boulevard Suite D, Farmingdale, NY 11735 USA • Phone: (631) 293-8944 • Email: govmark.test.reports@sgs.com**

| | | | | | |
|---|---|---|---|---|---|
| **Tested For:** | **Roman Maslej** | **Phone:** | (416) 825-9880 | **Received:** | 11/14/2023 |
| | Bodaq Finishes LLC | **Fax:** | | **Completed:** | 11/20/2023 |
| | 11593 Newland St. | **Mobile:** | | **Code:** | X |
| | Westminster, CO 80020 | **PO#:** | | **Test Report:** | 3-53775-0 |
| | USA | **Email:** | roman.m@nelcos.com | | |

**Key Test:** ASTM E84 (Int Fin) 745

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

DocuSigned by:
Michael Magee
1D12C24670FA402...

11/22/2023

AUTHORIZED SIGNATURE
SGS NORTH AMERICA
/sj /dv

Test Engineer: Jimmy Rosinsky

DS
MM

Enclosure: Graphs





**96 Allen Boulevard Suite D, Farmingdale, NY 11735 USA • Phone: (631) 293-8944 • Email: govmark.test.reports@sgs.com**

Program: Steiner Tunnel (Version 1.0.3.0)

| | | |
|---|---|---|
| Test Method | : | ASTM E84 |
| Report # | : | 3-53775-0-X |
| Test Date | : | 11/20/2023 |
| Client | : | Bodaq Finishes LLC |
| Operator | : | Jimmy Rosinsky |
| Details of Preparation | : | The test specimen was self stuck to 1/4" Inorganic Reinforced Cement (IRC) boards. The 24 ft. length was comprised of three 8 ft. sections butted end to end. |
| Observations | : | No unusual observations |

**Results**

| | | |
|---|---|---|
| Area Under Flame Curve (ft min) | : | 0.97 |
| Raw Flame Spread Index | : | 0.50 |
| Ignition Time (mm:ss) | : | 05:41 |
| Area Under Smoke Curve (%A min) | : | 0.68 |
| Raw Smoke Developed Index | : | 0.86 |
| Total Gas Flow ($ft^3$) | : | 56.4 |
| Maximum Flame Front Achieved (ft) | : | 0.4 @ 450s |
| **Flame Spread Index** | : | **0** |
| **Smoke Developed Index** | : | **0** |
| **Material Classification** | : | **A** |

CERTIFICATION : I certify that the above results were obtained after testing the specimens in accordance with the procedures and equipment specified by ASTM E84

Jimmy Rosinsky

AUTHORIZED SIGNATURE

Program: Steiner Tunnel (Version 1.0.3.0)

Test Method : ASTM E84
Test Report # : 3-53775-0-X