Std. Top Cover (Putty)

Certificate of Flame Resistance

REGISTERED APPLICATION CONCERN No.

F-12241

ISSUED BY

Herculite Products, Inc.
P.O Box 435
Emigsville, PA 17318

Date Work Performed

02/12/14

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Customer Number: 1952

Date: 11/12/15

This is to certify that the materials described on the bottom hereof have been flame-retardant treated (or are inherently nonflammable).

FOR Pacific Yurts AT 77456 Highway 99 S

CITY Cottage Grove STATE OR 97424

Certification is hereby made that: (Check "a" or "b")

[ ] (a) The articles described on the bottom of this Certificate have been treated with a flame-retardant chemical approved and registered by the State Fire Marshal and that the application of said chemical was done in conformance with the laws of the State of California and the Rules and Regulations of the State Fire Marshal

Name of chemical used _____ Chem. Reg. No _____

Method of application _____

[X] (b) The articles described on the bottom hereof are made from a flame-resistant fabric or material registered and approved by the State Fire Marshal for such use.

Trade name of flame-resistant fabric or material used Structural 18-X-Life Reg. No F-12241

The Flame Retardant Process Used WILL NOT **Be Removed By Washing**

(will or will not)

Name of Production Superintendent By *Q C Manager*

CONTROL NUMBER 11397-0

CUSTOMER ORDER NUMBER 5810

CUSTOMER INVOICE NUMBER 198046

YARDS OR QUANTITY 1,425 YD

COLOR Putty

STYLE Structural 18-X-Life

DATE PROCESSED 11/19/2014

STANDARD TOP COVER

The Govmark Organization, Inc.

96-D Allen Bouleva
Farmingdale, New
Tel. +1 (631) 293-8
e-mail: info@govm

RESURGAM CITY OF PORTLAND, MAINE

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

Received:01/13/2006	Completed:01/24/2006	Letter: K1	rb	P.O.#: P209290	Test Report #:

Client's Identification	Resource No. 101634 Structural-18 X-Life Putty ML# 34238.

Tested For: Valerie Wagman
Herculite Products
PO Box 435
Emigsville, PA 17318

Key Test: NFPA 701-2004 TM#2 Flat WL 210

Tel: 1-(800)-772-0036 **Ext:** 2273
Fax: 1-(717)-718-8734

PC:1H

TEST PERFORMED: NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films - 2004 Edition - Test Method #2 - Flat Sheet Specimens

SPECIMEN CONFIGURATION: [x] Single Layer; [ ] Multi Layer

RESULTS REPORTED: [ ] Initially
[ ] After 3 dry cleanings
[ ] After 5 launderings @ 160°F
[x] After 72 hours water leaching
[ ] After 100 hours accelerated weathering

RESULTS:

Length Specimen #	Afterflame (seconds)	Drip Burn (seconds)	Char Length (mm)
1	0	0	190
2	0	0	190
3	0	0	250
4	0	0	210
5	0	0	220
6	0	0	220
7	0	0	250
8	0	0	210
9	0	0	210
10	0	0	210

APPROXIMATE WEIGHT OF MATERIAL (as measured by Govmark): 662 g/m²

FAILURE CRITERIA: For each individual specimen --

Afterflame	Drip Burn	Char Length
Exceeds 2.0 seconds	Exceeds 2.0 seconds	Exceeds 435 mm (17.1")

RETEST PROVISION: Test 5 additional specimens if only 1 specimen fails.

CONCLUSION: Based on the above Results and Failure Criteria, the item tested:

[x] Passes; [ ] Fails; [ ] Requires testing of 5 additional specimens

CERTIFICATION: I certify that the above results were obtained after testing specimens in accordance with the procedures and equipment specified by NFPA 701 - 2004 Edition Test Method #2 Flat Sheet Specimens.

AUTHORIZED SIGNATURE
THE GOVMARK ORGANIZATION, INC. /jd AH

Invoice Copy

The Govmark Organization, Inc.

96-D Allen Boulev
Farmingdale, New
Tel. +1 (631) 293-
e-mail: info@govm

RESURGAM CITY OF PORTLAND, MAINE

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

Received: 01/13/2006	Completed: 01/24/2006	Letter: K	rb	P.O.#: P209290	Test Report #:

Client's Identification	Resource No. 101634 Structural-18 X-Life Putty ML# 34238.

Tested For: **Valerie Wagman**
Herculite Products
PO Box 435
Emigsville, PA 17318

Key Test: NFPA 701-2004 TM#2 Flat 210

Tel: 1-(800)-772-0036 **Ext:** 2273
Fax: 1-(717)-718-8734

PRECONDITIONING: [x] 1 hr @ 220°F (Standard)
[ ] 24 hrs @ 68±9°F (Alternate: Material shrinks/distorts @ 220°F)

REMARKS:
None.

CONVERSION FACTORS:
mm ÷ 25.4 = inches
g/m² ÷ 28.35 x .835 = oz/yd²

The results contained in this report relate only to item(s) tested. The test report shall not be reproduced, except in full, without written approval from The Govmark Organization, Inc.

Invoice Copy

Premium To

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

CALIFORNIA DEPARTMENT OF FORESTRY and FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL

REGISTERED FLAME RESISTANT PRODUCT

Product:
DURO-LAST MEMBRANE

Registration No.
F-66801

Product Marketed By:
DURO-LAST ROOFING INC.
525 MORLEY DRIVE
SAGINAW, MI 48601

This product meets the minimum requirements of flame resistance established by the California State Fire Marshal for products identified in Section 13115, California Health and Safety Code.

The scope of the approved use of this product is provided in the current edition of the **CALIFORNIA APPROVED LIST OF FLAME RETARDANT CHEMICALS AND FABRICS, GENERAL AND LIMITED APPLICATIONS CONCERNS** published by the California State Fire Marshal.

Deputy State Fire Marshal

Expire: 6/30/2015

FR-8

Architectural Testing

Test Report No.: B
Report
Test Record Retention End

RESURGAM CITY OF PORTLAND, MAINE

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

1.0 Report Issued To: DURA-LAST, INC.
525 Morley Drive
Saginaw, Michigan 48601

2.0 Test laboratory: Architectural Testing, Inc.
130 Derry Court
York, Pennsylvania 17406-8405
717-764-7700

3.0 Project Summary:

3.1 Product Type: PVC Roofing Membrane

3.2 Series/Model: Duro-Last® Specially Formulated Roofing Membrane

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test method(s). A summary of the results is listed in the Test Results section of this report.

3.4 Test Date: 01/25/12

3.5 Test Location: Architectural Testing, Inc., test facility in York, Pennsylvania.

3.6 Test Sample Source: The test specimen was provided by the client. Representative samples of the test specimen(s) will be retained by Architectural Testing for a minimum of four years from the test completion date.

3.7 List of Official Observers:

Name	Company
Ethan Grove	Architectural Testing, Inc.
Russell Clark	Architectural Testing, Inc.

4.0 Test Method(s), Practices and/or Classifications:

NFPA 701 (2010), *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films (Method 2)*

RESURGAM CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/12/15

5.0 Test Specimen Description:

Date Tested:	01/25/12
Manufacturer*:	Dura-Last, Inc.
Product Type:	PVC Roofing Membrane
Series/Model:	Duro-Last® Specially Formulated Roofing Membrane
Composition*:	PVC
Conditioning:	1-3 Hours at 220°F
Size:	5-1/16 in wide by 46-3/4 in long (128 mm wide by 1187 mm long)
Thickness*:	40 mil
Color*:	Tan

*From the client's material description and/or instructions

Note: Specimens were conditioned as per the requirements of NFPA 701 (2010) for Test Method utilized.

6.0 Test Results: The test results are tabulated as follows:

Test Results (Test Method 2)				
Specimen	**Char Length (in)**	**After Flame Time (min:sec)**	**Burning on Floor (min:sec)**	**Pass/Fail**
1	2-1/4	00:00	00:00	Pass
2	2-1/8	00:00	00:00	Pass
3	2-3/16	00:00	00:00	Pass
4	2-3/8	00:00	00:00	Pass
5	2-13/16	00:00	00:00	Pass
6	1-7/8	00:00	00:00	Pass
7	15/16	00:00	00:00	Pass
8	1-1/16	00:00	00:00	Pass
9	2-1/4	00:00	00:00	Pass
10	1-1/2	00:00	00:00	Pass

Note: The test specimen was tested as a flat sheet. Pass/Fail Criteria is as per NFPA 701 (2010) Section 15.1.1 through 15.1.4.

Observations: Minor shrinkage inward from the sides and at the center. No dripping or after flame observed. Little to no odor or smoke was observed.

The purpose of Test Methods 1 and 2 shall be to assess the propagation of flame beyond the area exposed to the ignition source. Test Methods 1 and 2 shall not be deemed to indicate whether the material tested resists the propagation of flame under more severe fire exposure conditions or when the material is used in a manner that differs from the test conditions. (NFPA 701 (2010), section 1.2.1 and 1.2.2)

RESURGAM CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/12/15

7.0 Test Equipment Used:

Device	Asset No.
Dwyer Pressure Gauge	63478
Sierra Flow Meter	63521
Traceable Stopwatch	63215
Traceable Stopwatch	63216
Thermometer (Used with oven)	63522
SPI Ruler	62733

The service life of this report will expire on the stated Test Record Retention End Date, at which time such materials as drawings, data sheets, samples of test specimens, copies of this report, and any other pertinent project documentation, shall be discarded without notice.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.

Digitally Signed by: Russell Clark

Russell W. Clark
Technician

Digitally Signed by: Brady W. McNaughton

Brady W. McNaughton, P.E.
Program Manager – Fire Testing

RWC:ddr

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Photographs (1)

DURO-LAST PHYSICAL PROPERTIES AS OUTLINED BY ASTM D-4434

RESURGAM CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/12/15

TEST DESCRIPTION	TEST METHOD	METRIC RESULTS	ENG
Thickness, Nominal	ASTM D-751	1 mm	4
Weight	ASTM D-751	1.1 kg per m^2.	0.
Trapezoidal Tear Strength, Min.	ASTM D-5587	578 x 498 N	130 x 172 lbf.
Breaking Strength, Min.	ASTM D-751	1935 x 1557 N	435 x 350 lbf.
Tensile Strength	ASTM D-751, ASTM-D882	506 K/cm^2	7200 PSI
EMMAQUA Exposure	ASTM G90, Desert Sun	339,790 M/J/m^2	>8.1 million langleys
Heat Aging	ASTM D-3045 (7 days @ 194°F)	Retains 90% of Breaking Strength, >95% of elongation	
Elongation	ASTM D-751	25%	
Dimensional Stability	ASTM D-1204, 80° C, 6 hrs.	< 0.05%	
Low Temperature Flexibility	ASTM D-2136, 3 mm Mandrel	No Cracks -40° C	No Cracks -40° F
Dynamic Puncture Resistance	ASTM D-5635	20 J	474 PDL-FT
Static Puncture Resistance	ASTM D-5602	>533 N	>120 PSF
Moisture Vapor Transmission	ASTM E-96, Proc. B, Method A	< 0.086 g/hr/m^2	< 0.25 U.S. Perms
Fungi Resistance	ASTM G-21	No sustained growth or discoloration	
Factory Mutual Research	ASTM E-108; FM 4450 & FM 4470	Class 1-60, 1-90, 1-105, 1-150 & 1-210	
Underwriters Laboratories	UL-790	Class A, B & C	
Solar Reflectance	ASTM C1549	88%	
Thermal Emittance	ASTM C1371-98	87%	

100% Polyester Side Cover

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

CALIFORNIA DEPARTMENT OF FORESTRY and FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL

REGISTERED FLAME RESISTANT PRODUCT

Product:
AVENUE

Registration No.
F-07607

Product Marketed By:
GRANITEVILLE SPECIALTY FABRICS
511 LEITNER STREET
GRANITEVILLE, SC 29829

This product meets the minimum requirements of flame resistance established by the California State Fire Marshal for products identified in Section 13115, California Health and Safety Code.

The scope of the approved use of this product is provided in the current edition of the **CALIFORNIA APPROVED LIST OF FLAME RETARDANT CHEMICALS AND FABRICS, GENERAL AND LIMITED APPLICATIONS CONCERNS** published by the California State Fire Marshal.

Deputy State Fire Marshal

Expire: 6/30/2015

FR-8

CERTIFICATE OF FLAME RESISTANCE
ISSUED BY

Graniteville
Specialty Fabrics

RESURGAM CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

DATE: 08/02/11

511 Leitner Street
PO BOX 520
Graniteville, South Carolina 29829

This certificate is to certify that the fabric described below and in the corresponding Customer Invoice, issued by GSF, with Number Pacific Yurts, Applicable Customer Ref./ID Number 6250 and customer to GSF PO# 200624 has been tested, quality checked and approved in accordance with the standards associated with **CPAI-84, CSFM,CA19,NFPA 701-2010**

Product AVENUE

Lot No. 3004897

Pattern 05252

Color DARK LINEN

08/02/11

Quality Control Laboratory Report Number Date

Doug Johnson

Certified By: Doug Johnson Plant Manager

Polyester Side Cover

The Govmark Organization, Inc.

98-D Allen Boulev
Farmingdale, New
Tel. +1 (631) 293-
e-mail: info@govm

RESURGAM CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/12/15

Received:05/09/2011	Completed:05/11/2011	Letter: K	rb	P.O.#:	Test Report #:

Client's Identification	Main Street Black Lot 3004625. [Specimens cut and marked by client]

Tested For: Doug Johnson
Graniteville Specialty Fabrics
511 Leitner Street
Graniteville, SC 29829

Key Test: CA 1237 Sm 135

Tel: 1-(803)-633-2350 Ext:
Fax: 1-(803)-663-2908

PC: 1H /jd

TEST PERFORMED: California Fire Marshal Title 19: Section 1237 (Proposed Revision 8/9/93) Fire Resistance; Small Scale Test - EXTERIOR MATERIALS QUALIFICATION

RESULTS REPORTED: [x] Initially
[ ] After 72 hours water leaching
[ ] After 100 hours weathering

RESULTS:	Specimen #	Afterflame (seconds)	Afterglow (seconds)	Char Length (inches)
Warp:	1	0.0	18.5	4.5
	2	0.0	12.6	4.4
	3	1.2	13.2	4.7
	4	0.0	10.7	4.6
	5	0.0	17.5	4.8
	Avg:	0.2		
Fill:	6	4.1	17.4	4.6
	7	0.0	29.8	4.3
	8	0.0	20.2	5.1
	9	2.7	21.9	3.9
	10	0.0	18.7	4.3
	Avg:	1.4		

APPROXIMATE WEIGHT OF MATERIAL (as measured by Govmark): 11.4 oz/yd²

ACCEPTANCE CRITERIA:

Afterflame: 4.0 seconds maximum avg for length or width
Afterglow: (see Note #2 below)
Char Length: 6.0" maximum for any individual specimen

Notes:

1. An asterisk (*) next to any char length measurements indicates that a part of the char length is melt away due to heat from the flame source and not from propagating flame. Therefore, the sample submitted meets the requirements of Title 19 - California Code of Regulations, Section 1237 and 1237.1 for materials weighing less than 4 oz/yd².

2. Afterglow is required to be reported; however, it is not factored into the Acceptance Criteria.

File Copy

The Govmark Organization, Inc.

98-D Allen Boulev
Farmingdale, New
Tel. +1 (631) 293-
e-mail: info@govm

RESURGAM CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/12/15

Received: 05/09/2011	Completed: 05/11/2011	Letter: K	rb	P.O.#:	Test Report #:

Client's Identification	Main Street Black Lot 3004625. [Specimens cut and marked by client]

Tested For: Doug Johnson
Graniteville Specialty Fabrics
511 Leitner Street
Graniteville, SC 29829

Key Test: CA 1237 Sm

135

Tel: 1-(803)-633-2350 Ext:
Fax: 1-(803)-663-2908

CONCLUSION: Based on the above Results and Acceptance Criteria, the item tested:

[x] Complies; [ ] Does not comply

REMARKS: None.

NOTE: In August 1993 the State Fire Marshal issued a proposed revision, which permitted a maximum average afterflame of 4.0 seconds. This proposed revision was honored by the subsequent State Fire Marshal until approximately February 2004, at which time the State Fire Marshal's office reverted to the unrevised rule of 2.0 seconds maximum average for exterior fabric.

In a conversation with the latest California State Fire Marshal on August 9, 2007, it was learned that the proposed 1993 revision is now back in effect. In addition to allowing 4 seconds Afterflame rather than 2 seconds, the proposed revision provides for testing of 10 specimens, rather than 6 specimens. This information has been verified current per an April 28, 2010 conversation with the California State Fire Marshall.

CERTIFICATION: I certify that the above results were obtained after testing specimens in accordance with the procedures and equipment specified by California Fire Marshal Title 19: Section 1237 (Proposed Revision 8/9/93).

MAY 12 2011

AUTHORIZED SIGNATURE
THE GOVMARK ORGANIZATION, INC. /rb /mg

MS. PHYLLIS PETTIT

The results contained in this report relate only to item(s) tested. The test report shall not be reproduced, except in full, without written approval from The Govmark Organization, Inc.

File Copy

COMMERCIAL TESTING CO
1215 South Hamilton Street • Post Office Box 985 • Dalto
Telephone (706) 278–3935 • Facsimile (706) 278-

RESURGAM CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

Standard Method of Test for
Surface Burning Characteristics of Building Materials

ASTM E 84–09

Main Street, Pattern: 301 MST

Report Number 09–06139

Test Number 4082–6957
June 12, 2009

Glen Raven Technical Fabrics, LLC
Statesville, North Carolina

Commercial Testing Company

Dwane Jackson
(Authorized Signature)

This report is provided for the exclusive use of the client to whom it is addressed. It may be used in its entirety to gain product acceptance from duly constituted authorities. The test results presented in this report apply only to the samples tested and are not necessarily indicative of apparent identical or similar materials. Sample selection and identification were provided by the client. A sampling plan, if described in the referenced test procedure, was not necessarily followed. This report, or the name of Commercial Testing Company, shall not be used under any circumstance in advertising to the general public.

TESTED TO BE SURE®
Since 1974

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/12/15

INTRODUCTION

This report is a presentation of results of a surface flammability test on a material subm Raven Technical Fabrics, LLC, Statesville, North Carolina.

The test was conducted in accordance with the ASTM International fire test response standard E 84–09, *Surface Burning Characteristics of Building Materials,* sometimes referred to as the Steiner tunnel test. This test is applicable to exposed surfaces such as walls and ceilings. The test is conducted with the specimen in the ceiling position with the surface to be evaluated exposed face down to the ignition source. The ASTM E 84 test method is the technical equivalent of NFPA No. 255 and UL No. 723.

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 materials, products, or assemblies under actual fire conditions.

PURPOSE

The purpose of the test is to provide only the comparative measurements of surface flame spread and smoke development of materials with that of select grade red oak and fiber–reinforced cement board, Grade II, under specific fire exposure conditions. The test exposes a nominal 24-foot long by 20-inch wide test specimen to a controlled air flow and flaming fire adjusted to spread the flame along the entire length of a red oak specimen in 5.50 minutes. During the 10-minute test duration, flamespread over the specimen surface and density of the resulting smoke are measured and recorded. Test results are calculated relative to red oak, which has an arbitrary rating of 100, and fiber–reinforced cement board, Grade II, which has a rating of 0.

The test results are expressed as Flame Spread Index and Smoke Developed Index. The Flame Spread Index is defined in ASTM E 176 as "a number or classification indicating a comparative measure derived from observations made during the progress of the boundary of a zone of flame under defined test conditions." The Smoke Developed Index, a term specific to ASTM E 84, is defined as "a number or classification indicating a comparative measure derived from smoke obscuration data collected during the test for surface burning characteristics." There is not necessarily a relationship between the two measurements.

The method does not provide for measurement of heat transmission through the surface tested, the effect of aggravated flame spread behavior of an assembly resulting from the proximity of combustible walls and ceilings, or classifying a material as noncombustible solely by means of a Flame Spread Index.

The zero reference and other parameters critical to furnace operation are verified on the day of the test by conducting a 10–minute test using 1/4–inch fiber–reinforced cement board, Grade II. Periodic tests using NOFMA certified 23/32–inch select grade red oak flooring provide data for the 100 reference.

TEST SAMPLE

The test sample, selected by the client, was identified as **Main Street, Pattern: 301 MST**, a coated fabric more fully described below. The material was conditioned to equilibrium in an atmosphere with the temperature maintained at 71 ± 2°F and the relative humidity at 50 ± 5 percent. For testing, one length of the material, measuring 2 feet wide by 24 feet in length, was free laid over a 2–inch hexagonal wire mesh supported by 1/4–inch diameter steel rods spanning the ledges of the tunnel furnace at 24–inch intervals. This method of auxiliary sample support is described in Appendix X1 of the E 84 standard, Guide to Mounting Methods, Sections X1.1.2.2(a) and X1.1.2.3.

SAMPLE DESCRIPTION

Identification:	Main Street, Pattern: 301 MST
Type Material:	Coated Fabric
Lot Number:	04372
Total Weight:	11.2 ounces per square yard
Thickness:	0.021 inch

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

TEST RESULTS

The test results, calculated on the basis of observed flame propagation and the integrated a recorded smoke density curve, are presented below. The Flame Spread Index obtained in E to the nearest number divisible by five. Smoke Developed Indices are rounded to the nearest number divisible by five unless the Index is greater than 200. In that case, the Smoke Developed Index is rounded to the nearest 50 points. The flame spread and smoke development data are presented graphically at the end of this report.

Test Specimen	Flame Spread Index	Smoke Developed Index
Fiber–Reinforced Cement Board, Grade II	0	0
Red Oak Flooring	100	100
Main Street, Pattern: 301 MST	**10**	**250**

OBSERVATIONS

Specimen ignition over the burners occurred at 0.12 minute. Surface flame spread was observed to a maximum distance of 1.56 feet beyond the zero point at 0.63 minute. The maximum temperature recorded during the test was 489°F.

CLASSIFICATION

The Flame Spread Index and Smoke Developed Index values obtained by ASTM E 84 tests are frequently used by code officials and regulatory agencies in the acceptance of interior finish materials for various applications. The most widely accepted classification system is described in the National Fire Protection Association publication NFPA 101 *Life Safety Code,* where:

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

Class A, B, and C correspond to Type I, II, and III respectively in other codes. They do not preclude a material being otherwise classified by the authority of jurisdiction.

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

ASTM E 84 TEST DATA

Client: Glen Raven Technical Fabrics LLC
Test Number: 4082-6957
Material Tested: Main Street, Pattern: 301 MST
Date: June 12, 2009

Test Results:

Time to Ignition = 00.12 minutes
Maximum Flamespread Distance = 01.56 feet
Time to Maximum Spread = 00.63 minutes

Flame Spread Index = 10
Smoke Developed Index = 250

Vinyl Polyester Side Cover

Certificate of Flame Resi

ISSUED BY
JOHN BOYLE & COMPANY, INC.
1803 Salisbury Hwy
Statesville, NC 28677
704-878-6175

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

This is to certify that the materials described below have been flame-retardant treated (or are inherently nonflammable).

FOR
PACIFIC YURTS INC
77456 HWY 99 SOUTH
COTTAGE GROVE
OR 974240000

Certification is hereby made that: (Check "a" or "b")

[ ] (a) The articles described below this Certificate have been treated with a flame-retardant chemical approved and registered by the State Fire Marshal and that the application of said chemical was done in conformance with the laws of the State of California and the Rules and Regulations of the State Fire Marshal.

Name of chemical used _____ Chem. Reg. No. _____

Method of application _____

[X] (b) The articles described below are made from a flame-resistant fabric or material registered and approved by the State Fire Marshal for such use.

Trade name of flame-resistant fabric or material used
522
PATIO 61" 522 BEIGE Reg. No. F-12102

The Flame-Retardant Process Used WILL NOT Be Removed By Washing

JOHN BOYLE & COMPANY, INC.
Name of Applicator or Production Superintendent

JOHN BOYLE & COMPANY, INC.
By Michael Dorfman
President/Michael B. Dorfman

Control Number	00126
Order Number	88677
Customer Number	1078212
PO Number	
Invoice Number	1426019
Quantity	300.00

Sell Certified Flame-Retardant Fabrics By BOYLE
Your product will meet the rigid specifications of the California Fire Marshal.

JOHN BOYLE & COMPANY AND DISTRIBUTORS

FLAME1

Vinyl/Polyester Side Cover

HERCULITE®

Powered by Innovation ◆ Proven by Performance

RESURGAM CITY OF PORTLAND, MAINE

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

January 13, 2012

A representative lot of Patio 500 was sent to an outside laboratory and was tested in accordance with the National Fire Prevention Association No. 701, "Flame Propagation of Textiles and Films, 2010 Edition (Test 2, Large Scale)". The sample submitted meets the minimum requirement of the above noted standard.

Stephanie Mummert

S. Mummert

Quality Analyst

P.O. BOX 435, EMIGSVILLE, PA 17318 USA
(800) 772-0036 (717) 764-1192 FAX (717) 764-5211
WWW.HERCULITE.COM

TESTING LABORATORIES, INC.

"We Test Pe

336 WEST FRONT STREET
P.O. BOX 4004
BURLINGTON, NORTH CAROLINA 27215
PHONE (336) 227-7710 • FAX (336) 227-1175
www.diversifiedtestinglabs.com

RESURGAM CITY OF PORTLAND, MAINE

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

April 7, 2011

Ms: Stephanie Mummert
HERCULITE PRODUCTS, INC.
P.O. Box 435
Emigsville, PA 17318

Reference: Flammability Test Report
Lab Identification No. 7412
Invoice No. 28915 (Attached)

Dear Ms. Mummert:

One (1) sample, identified as **PATIO 500 536 COBALT 111026, LOT# 46699,** was received and tested in accordance with the California Administrative Code Title 19--Public Safety, Section 1237. Flame Resistance, Small Scale Test. **The sample was tested after 100 hours of accelerated weathering.** The results are as follows:

Specimen Number	After Flame Time (sec)		Char Length (in)	
	Length	Width	Length	Width
1	0.0	0.0	3.9	3.9
2	0.0	0.0	3.5	4.3
3	0.0	0.0	3.8	4.1
4	0.0	0.0	4.3	3.7
5	0.0	0.0	4.2	3.7
Avg.	0.0	0.0		

The sample submitted, when tested after 100 hours accelerated weathering, **meets** the minimum requirements of the above standard. The char length may not exceed 6.0 inches for any individual specimen and the average afterflame time may not exceed 4.0 seconds in the length or width directions.

If there are any questions or when we can be of further assistance, please let us know.

Sincerely,

Bobby E. Puett

BEP/mr
Attachment

OUR LETTERS AND REPORTS ARE FOR THE EXCLUSIVE USE OF THE CLIENT TO WHOM THEY ARE ADDRESSED. ANY COMMUNICATION TO OTHERS OR THE USE OF OUR COMPANY NAME MU RECEIVE PRIOR APPROVAL. OUR TEST RESULTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMIL PRODUCTS. SAMPLES NOT DESTROYED IN TESTING ARE RETAINED A MAXIMUM OF THIRTY DAYS. THE LETTERS, REPORTS OR NAME OF DIVERSIFIED TESTING LABORATORIES, INC. MAY N BE USED IN ADVERTISING TO THE GENERAL PUBLIC.

Patio 500®

General Information Stater

Patio 500 is the ideal choice for awnings, canopies and commerci

and sunny Florida -- an area that puts the best in fabrics to the tes

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

Style Information

Product #	Color	Mill Style
600900500	Turquoise	500
600900503	Royal Blue	503
600900504	Lemon	504
600900505	Devil Red	505
600900506	Slate Gray	506
600900508	Black	508
600900509	Orange	509
600900510	Dark Green	510
600900513	Clear	513
600900514	Lime Green	514
600900515	Buff	515
600900516	Brown	516
600900518	Dusky Blue	518
600900519	Rose	519
600900520	Peach	520
600900521	English Brown/Beige	521
600900522	Beige	522
600900523	White	523
600900524	Eggshell	524
600900525	English Brown	525
600900526	Terra Cotta	526
600900527	Burgundy	527
600900528	Pewter	528
600900529	Bright Red	529
600900560	Pink	560
600900562	Emerald	562
600900563	Plum	563
600900564	Teal	564
600900565	Reef Blue	565
600900566	Sunflower	566
600900567	Jade	567
600900568	Princess	568
600900569	Mulberry	569

Construction Characteri

Weight (ounces/yd.)		
Width (inches)		61 +/- .25
Tensile (lbs/in)	*warp*	270 +/- 20
	fill	215 +/- 20
Tear (lbs)	*warp*	110 +/- 15
	fill	100 +/- 15
Mullen Burst, psi		375 +/- 30
Scrim Count		9 x 9
Denier		1000 x 1000
Stitch		*Flat* ☐
		Round ☒
Embossed		Matte

Graphics

System	Company	Product
Paint	Advance	WBMP and Hip Series
	Sericol	Tech Mark Series
		Tech Mark Series w/ catalyst 10% by wt
	Akzo Coatings	Grip-Flex Screen Paint Series **
		Grip-Flex Spray Paint Series **
		Grip-Gard VPS (Vinyl Protect. Sys.)
Ink	Ink Dezyne	GY-000 Series (excellent)
	Colonial Printing Ink Company	Gloss Vinyl Series C99 *
		Flat Finish Vinyl Series 3900 *
		Multigraphic U.V. Series D40 & D47
		Flexijet Series C34 *

* Good cross-hatch/tape adhesion. Marginal scratch adhesion. Suitability s/b determined by its end use.

** Must be topcoated w/ Grip-Gard VPS

Put-up Specs

One-piece rolls of approx. 50 yard Minor defects flagged

Product Characteristics

Ultraviolet resistant	☒
Heat sealable	☒
Mildew resistant	☒
Rot resistant	☒
California State Fire Marshal	☒
CPAI-84 (top, sidewall & floor)	☒
NFPA-701-99	☒
Motor Vehicle Safety Standard 302	☒
ASTM-E-84, Class A	☒

Comments: Heat sealable, easily welded. Exceptional dimensional stability.

Warranty: 5 year limited, with provisions (see card)

This information is provided for informational purposes only and does not constitute a certification. This information is accurate at the time of printing and will change over time with product improvements and modifications. Please call your JBC representative for the most recent information. This revision dated 1/7/02

Insulation Liner

Graniteville Specialty Fabrics

RESURGAM CITY OF PORTLAND, MAINE

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

Quality Control

Laboratory Test Report

Tex Tex

November 21, 2011

Test:	Lot 3005031
Finished Weight (oz/yd^2), ASTM D 3774	4.78
Width (inches), GSF Method	60 5/8
Spray, AATCC Method 22	90
Hydrostat (cm), AATCC Method 127	37
Chatillon Hand (lbf), ASTM D 4032	2.2
Bag Test	Pass
Tongue Tear Warp x Fill ASTMD 22561	5.8 x 8.9
Tensile Warp x Fill ASTM 5034	143 x 135
CPAI - 84 Flame Test	Pass
California State Fire Marshall CA Title 19 1237.1	Pass
NFPA 701-2010	Pass

CERTIFICATE OF FLAME RESISTANCE
ISSUED BY

Graniteville
Specialty Fabrics

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

DATE: 7/15/2011

511 Leitner Street
PO BOX 520
Graniteville, South Carolina 29829

This certificate is to certify that the fabric described below and in the corresponding Customer Invoice, issued by GSF, with Number PACIFIC YURTS, Applicable Customer Ref./ID Number 6250 and customer to GSF PO# 6108 has been tested, quality checked and approved in accordance with the standards associated with **CPAI-84,CSFM,CA19,NFPA 701-2010**

Product TEX TEX

Lot No. 3004845

Pattern 58601

Color WHITE

7/15/2011

Quality Control Laboratory Report Number Date

Doug Johnson

Certified By: Doug Johnson Plant Manager

The **Govmark** Organization, Inc.

96-D Allen Bou
Farmingdale, N
Tel. +1 (631) 2
e-mail: info@g

RESURGAM CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/12/15

Received:08/27/2007	Completed:09/03/2007	Letter: I	rb	P.O.#:	Test Repor

Client's Identification	Pattern No: 58601 "Tex-Tex" White. Content: Coated Polyester. Width: 60". Finish: Vinyl Coat 4.0/4.25

Tested For:
Graniteville Specialty Fabrics
511 Leitner Street
Graniteville, SC 29829

Key Test: NFPA 701-2004 TM#2 Flat 210

Tel: 1-(803)-633-2699 **Ext:**
Fax: 1-(803)-663-2839

PC:1H

TEST PERFORMED: NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films - 2004 Edition - Test Method #2 - Flat Sheet Specimens

SPECIMEN CONFIGURATION: [x] Single Layer; [ ] Multi Layer

RESULTS REPORTED: [x] Initially
[ ] After 3 dry cleanings
[ ] After 5 launderings @ 160°F
[ ] After 72 hours water leaching
[ ] After 100 hours accelerated weathering

RESULTS:

Length Specimen #	Afterflame (seconds)	Drip Burn (seconds)	Char Length (mm)
1	0	0.0	280
2	0	0.0	270
3	0	0.0	320
4	0	0.0	260
5	0	0.0	280
6	0	0.0	260
7	0	0.0	270
8	0	1.0	260
9	0	0.0	260
10	0	0.0	270

APPROXIMATE WEIGHT OF MATERIAL (as measured by Govmark): 158 g/m²

FAILURE CRITERIA: For each individual specimen --

Afterflame	Drip Burn	Char Length
Exceeds 2.0 seconds	Exceeds 2.0 seconds	Exceeds 435 mm (17.1")

RETEST PROVISION: Test 5 additional specimens if only 1 specimen fails.

CONCLUSION: Based on the above Results and Failure Criteria, the item tested:

[x] Passes; [ ] Fails; [ ] Requires testing of 5 additional specimens

CERTIFICATION: I certify that the above results were obtained after testing specimens in accordance with the procedures and equipment specified by NFPA 701 - 2004 Edition Test Method #2 Flat Sheet Specimens.

Heather E. Robertson

MS. HEATHER ROBERTSON

AUTHORIZED SIGNATURE
THE GOVMARK ORGANIZATION, INC. /jd

The Govmark Organization, Inc.

96-D Allen Bou
Farmingdale, N
Tel. +1 (631) 2
e-mail: info@g

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

Received:08/27/2007	Completed:09/03/2007	Letter: I	rb	P.O.#:	Test Repo
Client's Identification	Pattern No: 58601 "Tex-Tex" White. Content: Coated Polyester. Width: 60". Finish: Vinyl Coa 4.0/4.25				

Tested For:

Graniteville Specialty Fabrics
511 Leitner Street
Graniteville, SC 29829

Key Test: NFPA 701-2004 Tm#2 Flat 210

Tel: 1-(803)-633-2699 **Ext:**
Fax: 1-(803)-663-2839

PRECONDITIONING: [x] 1 hr @ 220°F (Standard)
[ ] 24 hrs @ 68±9°F (Alternate: Material shrinks/distorts @ 220°F)

REMARKS:
None.

CONVERSION FACTORS:
mm ÷ 25.4 = inches
g/m² ÷ 28.35 x .835 = oz/yd²

The results contained in this report relate only to item(s) tested. The test report shall not be reproduced, except in full, without written approval from The Govmark Organization, Inc.

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Inspections Division
Approved with Conditions

Date: 11/12/15

Reflectix® Insulation

Technical Information

RDB1

Double Bubble
Metalized Both Sides

Reflectix® Insulation consists of two outer layers of metalized polyester. Each layer is bonded to a tough layer of polyethylene for strength. Two inner layers of insulating bubbles resist conductive heat flow while a center layer of polyethylene gives Reflectix® high reliability and strength.

Technical Data:

	Temperature Range:	-60 degrees to +180 degrees F
	Nominal Thickness:	5/16 inch (.312)
	Weight:	1.25 oz./sq. ft.
*	Flame Spread Index (ASTM E 84):	Less than 25
*	Smoke Developed Index (ASTM E 84):	Less than 50
*	Fire Rating:	Class A/Class 1
	Linear Shrinkage:	None
	Reflectance (IR):	96%
	Fungi Resistance:	No Growth
	Emittance:	0.04 - 0.045
	Pliability:	No Cracking / No Delamination
	Bleeding and Delamination:	Passed
	Elevated Temperature & Humidity Resistance:	
	Delamination:	None
	Corrosion:	None
	Loss of Metalization:	None
	Permeance After Aging:	0.024
	Permeance Before Aging:	0.015

P.O. Box 108 • Markleville, IN • 46056
Phone: (765) 533-4332 or (800) 879-3645 • Fax: (765) 533-2327 • T85

Intertek Testing Services
ETL SEMKO

RESURGAM CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/12/15

CERTIFICATION REPORT OF A

STANDARD FLAME SPREAD PROGRAM

CONDUCTED ON A

THERMAL INSULATING MATERIAL

CLIENT:

REFLECTIX, INC.
#1 SCHOOL STREET
MARKLEVILLE, IN
46056

REPORT PREPARED BY:

INTERTEK TESTING SERVICES NA LTD.
WARNOCK HERSEY
211 SCHOOLHOUSE STREET
COQUITLAM, B.C.
V3K 4X9

REPORT NUMBER: 3029843

DATE: NOVEMBER 15, 2002
REVISED: NOVEMBER 21, 2002

All services undertaken are subject to the following general policy:

1. **This report is for the exclusive use of Intertek Testing Services NA Ltd.'s (ITS's) client and is provided pursuant to the agreement between ITS and its client. ITS's responsibility and liability are limited to the terms and conditions of the agreement. ITS assumes no liability to any party, other than to the client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report.**
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3. **The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product or service is or has ever been under an ITS certification program.**

RESURGAM CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/12/15

Revised: November 21, 2002

MATERIAL SPECIFICATIONS

The material tested was selected by a representative of ITS/Warnock Hersey, and prepared and submitted by the client. The samples consisted of three rolls. Each roll was made up of two layers of aluminium adhered to a layer of polyethylene, two inner layers of bubble, and a center layer of polyethylene. The material was described by the client as Reflectix Insulation, also sold under the private label name "TempShield™". All samples were approximately 24 ft. long by 20-1/2 in. wide by 3/16 in. thick.

SAMPLE MOUNTING

The samples were placed on the upper ledge of the flame spread tunnel on 1/4 in. stainless steel rods, spaced at 24 in. on center, and chicken wire to help support the material during the test. A layer of 6mm reinforced cement board was placed over top of the samples, the lid lowered into place, and then tested in accordance with ASTM E84-01.

RESURGAM CITY OF PORTLAND, MAINE
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TEST PROCEDURE *(Continued)*

(B) SMOKE DEVELOPED:

A photocell is used to measure the amount of light, which is obscured by the smoke passing down the tunnel duct.

When the smoke from a burning sample obscures the light beam, the output from the photocell decreases. This decrease with time is recorded and compared to the results obtained for red oak, which is 100.

CALCULATIONS:

$$\frac{10{,}000 - (\text{smoke integrator reading}) \times 100}{3356} = \text{smoke developed}$$

Reflectix, Inc.
Report No. 3029843

Nov

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 11/12/15

FLAME SPREAD
DISTANCE IN FEET VS. TIME IN MINUTES

N

RESURGAM CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
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Date: 11/12/15

CONCLUSION

The samples of "TempShield™" thermal insulating material, submitted by Reflectix, Inc., exhibited the following flame spread characteristics when tested in accordance with ASTM E84-01, *Standard Test Method for Surface Burning Characteristics of Materials*.

Sample	Flame Spread Classification	Smoke Developed Classification
Thermal Insulating Material	25	30

INTERTEK TESTING SERVICES NA LTD.
Warnock Hersey

Tested and Reported by:

Greg Philp
Technologist
Fire Laboratory

Reviewed by:

Michael van Geyn, A.Sc.T.
Manager
Fire Laboratory

TAG

GP/bjm