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CITY OF PORTLAND, MAINE · RESURGAM

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 07/01/14

CERTIFICATE OF COMPLIANCE

Certificate Number 20120813-E80939
Report Reference E80939-19830120
Issue Date 2012-AUGUST-13

Issued to: ARLON GRAPHICS L L C
2811 S HABOR BLVD
SANTA ANA CA 92704

This is to certify that representative samples of COMPONENT - SIGN ACCESSORIES
Flexible sign face systems for use in electric signs, designated "FLEXFACE FX", "FLEXFACE", MPF, MPG, "FLEXFACE S & R", "FLEXFACE PO", "Flexface PO - CA Fire Marshall Rated", Flexface NF, Flexface GF, Flexface NFX, Flexface GX, Cast Flex 10, Eradicolor, Flexface TC, ColorKote TC and Kolorite.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: Standard for Electric Sign Components, UL 879
Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Recognized Component Mark should be considered as being covered by UL's Recognition and Follow-Up Service.

The UL Recognized Component Mark generally consists of the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark: ᴿᴿ, may be used in conjunction with the required Recognized Marks. The Recognized Component Mark is required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual recognitions.

The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Recognized Component Mark on the product.

William R. Carney

William R. Carney, Director, North American Certification Programs

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at www.ul.com/contactus

PRODUCT INFORMATION BULLETIN

ARLON

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ColorKote™ TC

Colorkote™ TC is a flexible, reinforced, vinyl substrate, coated with premium ink and covered with FX outer protective coating. This flexible substrate is created for the sign and awning industries for backlit graphic applications. The premium ink and FX protective coating are designed to be removed with Arlon's Eradicator for various graphic capabilities. Colorkote™ TC provides protection, durability, superior appearance and longer life in outside environments.

APPLICATIONS & FEATURES

- Pre-decorated for eradicated graphics and/or solid background coverage.
- After eradication, warranties of uncovered areas may be extended with EradaShield.
- FX protective coating blocks plasticizer migration.
- Increased UV and heat resistance (to maintain white color).
- Easy cleaning.
- Wide range of colors.

COMPOSITION

Colorkote™ TC is manufactured using a premium cast PVC. A low shrink, high strength polyester scrim is embedded into the cast, white PVC film. The 500 denier yarn is treated with an anti-wicking formulation, and the PVC includes additives for weathering and microbial protection. Premium ink is applied to the top surface of the PVC for good anchorage followed by the specially formulated FX protective coating.

TECHNICAL SPECIFICATIONS

PROPERTY	UNITS	TEST RESULTS (AVERAGED)	TEST METHODS (AMERICAN STANDARD TEST METHODS)
THICKNESS	mil	24	Section 8, Vol. 08.01, D1593-89
	mm	.635	
WEIGHT	oz/sq yd	21	Section 8, Vol. 08.01, D1593-89
	g/sq m	705	
THREAD COUNT			
WARP (ALONG)	/sq in	20	
WEFT (ACROSS)	/sq in	20	
WARP (ALONG)	/sq cm	8	
WEFT(ACROSS)	/sq cm	8	
TENSILE STRENGTH AT BREAK			
WARP (ALONG)	lbf/linear in	178 (792 Newton Force)	Section 8, Vol. 08.01, D1593-89
WEFT (ACROSS)	lbf/linear in	159 (707 Newton Force)	
ELONGATION AT RUPTURE	%		
WARP (ALONG)		38	Section 8, Vol. 08.01, D1593-89
WEFT (ACROSS)		39	

*Standard Terms & Conditions Apply

Effective Date 06/11

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TECHNICAL SPECIFICATIONS (CONT'D)

PROPERTY	UNITS	TEST RESULTS (AVERAGED)	TEST METHODS (AMERICAN STANDARD TEST METHODS)
TEAR RESISTANCE			
WARP (ALONG)	lbf	22 (98 Newton Force)	Section 8, Vol. 08.01, D1593-89
WEFT (ACROSS)	lbf	16 (71 Newton Force)	
OPTICAL DENSITY	%	Each color varies Each color varies	
GLOSS	%	35	Section 8, Vol. 08.03, D2457-90
SEAM STRENGTH	lbf/linear	106 (471 Newton Force)	Section 8, Vol. 08.01, D882
WATER ABSORBTION	%	.6	Section 8, Vol. 08.01, D1593-89
HEAT STABILITY		No color change after 15 mins. in oven at 351°F (177°C)	Section 8, Vol. 08.02, D2115-67 (Re-approved 1988)
LOW TEMPERATURE		No crack at -14°F (-25°C)	Section 8, Vol. 08.01, D1593-89
UV RESISTANCE		No appreciable stiffening or cracking after 1000 hrs. under QUV test	Section 8, Vol. 08.03, D4329-92 (Test G53-91)
MILDEW RESISTANCE		Zero growth after 14 days.	Military equipment test (Mil-std.- 810C508), Test G21-80 and Vetron method B-20
ANTI-WICKING		1/4 in (6 mm) maximum wick	Permanent marker at edge of the Colorkote (Brand name of marker; Mark "A" Lot made by Dennison Stationery Products Co.)
SHRINKAGE		1/32 in (.8 mm) maximum shrinkage at 100° C for 30 mins.	Section 8, Vol. 08.01, D1593-89
CHEMICAL RESISTANCE		No visible sign at deterioration or weight loss.	Section 8, Vol. 08.01, D1239-55 (Re-approved 1982)
FLAME RESISTANCE		Flexface® (base substrate) meets all the requirements of the flame test.	·UL 48; Standard for Safety for Electric Signs, in accordance with the National Electrical Code, NFPA 701 ·UL 94; Tests for flammability of polymeric materials . ·Japan Fire Regulation article 8-3, CL. 8-3-1
UL APPROVAL		Flexface® (base substrate) meets Underwriters Laboratories Inc. requirements for a sign/awning material.	UL# E80939 (Sign Accessories)

USA: [illegible]
EUROPE: [illegible]
INDIA: [illegible]

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OTHER PROPERTIES & INSTRUCTIONAL INFORMATION

SUBSTRATE TEMPERATURE

The best temperature for tensioning Colorkote™ TC is between 50° to 100°F (10° to 35°C). Once tensioned, it will maintain its form without sagging between the temperatures -41° to 176°F (-42° to 80°C).

SMOOTH SURFACE

Colorkote™ TC surface is produced flat and smooth, which allows for minimized dirt settlement and proper graphic application.

ERADICATION & DECORATION PROCEDURES

Colorkote™ TC can be decorated by the following methods:

- Eradication with Arlon's Eradicator or acetone
  *(**Special Note:** Use of other thinners will damage aqueous coating and void warranty! See Arlon's Eradication Procedure.)*
- Pressure Sensitive Vinyl
- Heat Transfer
- Airbrushed onto eradicated areas (no specified warranty)
- Spray Painted onto eradicated areas (no specified warranty)

HANDLING, PACKAGING & SHIPPING

When packaging, roll up on a minimum 3 in (76 mm) diameter inner core with graphics facing out. When shipping, use an appropriate, sure fitting, shipping core.

STORAGE

Colorkote™ TC should be stored in a cool, dry environment. Preferred temperature is 60° to 75°F (16° to 24°C) with maximum humidity level of 50%.

SHELF LIFE

2 years.

SIZES

Colorkote™ TC is available in 7 ft x 150 ft (2134 mm x 45.72 m) width with no seams. Custom seamed rolls are also available at any height.

SEAMING

Colorkote™ TC is seamed with a 1/16 in (16 mm) overlap with seaming tape welded to the back surface of the material by the aid of a RF seaming machine.

*(**Special Note:** Arlon produces both eradicated and butt seams on a custom basis. An eradicated seam eliminates ink lines when white graphics are required over seamed areas). A butt seam can produce a slight white line between the seamed sections. This white line is acceptable after touch-up and at the normal viewing distance).*

PRE-CLEANING

If surface has to be cleaned, use a lint-free cloth moistened with a mixture of 1 part isopropyl alcohol to 1 part water. After cleaning use a dry lint-free cloth to remove any wet areas.

CLEANING

See Arlon's Cleaning Maintenance & Worldwide Warranty.

REPAIRS

Rips and cuts can be repaired with Arlon's Flexface Repair Kit or vinyl repair kit. The patch placed on the back of the Colorkote™ TC is practically invisible at a typical viewing distance.

WARRANTIES

Ten (10) years. Warranty may be extended in eradicated areas by applying EradaShield. For full warranty details, refer to Arlon's Worldwide Warranty Chart. The warranty will state the limitations and remedies.

SALES & TECHNICAL SUPPORT

For further information and literature relating to Colorkote™ TC, contact an Arlon Representative.

USA: [illegible]
EUROPE: [illegible]
INDIA: [illegible]

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