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

REGISTERED FLAME RESISTANT PRODUCT

Product:
PRECONTRAINT 502/532/832/1002

Registration No.
F-44401

Product Marketed By:
SERGE FERRARI
1510 S.W. 5TH COURT
POMPANO BEACH, FL 33069

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: 6/30/2014

FR-8

Intertek

TEST REPORT

REPORT NUMBER: 101204971MID-004
ORIGINAL ISSUE DATE: June 28, 2013
REVISED DATE: NA

EVALUATION CENTER
Intertek
8431 Murphy Drive
Middleton, WI 53562

RENDERED TO:

Serge Ferrari
Zone Industrielle BP 54
38352 La Tour Du Pin Cedex
38110 LA TOUR DU PIN
France

PRODUCT EVALUATED: Précontraint 502
EVALUATION PROPERTY: CAN/ULC-S109-03
FLAME TESTS OF FLAME - RESISTANT FABRICS AND FILMS

Report of Testing: Précontraint 502 for compliance with the applicable requirements of the following criteria: CAN/ULC-S109-03, FLAME TESTS OF FLAME - RESISTANT FABRICS AND FILMS

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2 Introduction

Intertek has conducted testing for Serge Ferrari, on Précontraint 502 to assess the flame resistance performance. Testing was conducted in accordance with CAN/ULC-S109-03, Flame Tests of Flame-Resistant Fabrics and Films. This evaluation began June 24, 2013 and was completed June 28, 2013.

3 Test Samples

3.1. SAMPLE SELECTION

Samples were submitted to Intertek directly from the client. Samples were not independently selected for testing. Samples were received at the Evaluation Center on May 8, 2013 in good condition.

3.2. SAMPLE AND ASSEMBLY DESCRIPTION

Précontraint 502
Polyester yarns coated with PVC flame retardant on both sides and varnished. Weight: 590g/m² ± 5%, Thickness: 0.47mm ± 10%, Polyester 1100dtex: 28% - PVC flame retardant 72%

Thirty pieces of Précontraint 502 were prepared by Intertek. Samples measuring 90 mm x 250 mm were tested. Fifteen samples were cut in the length direction of the roll and fifteen were cut in the width direction of the roll. Samples were conditioned in an oven at 105°C ± 3°C for 30 minutes and cooled in a desiccator prior to testing.
Twenty pieces of Précontraint 502 were prepared by Intertek.. Samples measuring 125 mm x750 mm were tested. Ten samples were cut in the length direction of the roll and ten were cut in the width direction of the roll. Samples were conditioned in an oven at 105°C ± 3°C for 30 minutes and cooled in a desiccator prior to testing.
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4 Testing and Evaluation Methods

4.1. TEST STANDARD

Intertek has conducted the testing in accordance with CAN/ULC-S109-03, Flame Tests of Flame-Resistant Fabrics and Films, Section 4 Test Methods, Subsection 4.3 Small Flame Test, Clauses 4.3.1 thru 4.3.6 and Subsection 4.4 Clauses 4.4.1 thru 4.4.8 Large-Flame Test. Specimens must meet the performance requirements listed in Section 3, Subsection 3.1, and Clauses 3.1.1 thru 3.1.4.

4.2. Deviation from Standard Method

No scrubbing or laundering was conducted on the samples.

5 Testing and Evaluation Results

5.1. RESULTS AND OBSERVATIONS

Small-Flame Test

Small-Flame Test unleached and unweathered

	SPECIMEN #	FLAME DURATION (SEC.)	CHAR LENGTH (mm.)	FLOOR FLAMES (SEC.)
W	1	1	76.00	0
	2	0	74.00	0
	3	1	88.00	0
	4	1	80.00	0
	5	0	86.00	0
L	6	0	85.00	0
	7	0	87.00	0
	8	0	79.00	0
	9	0	91.00	0
	10	1	90.00	0
	AVERAGE	0.40	83.60	0.00

Small-Flame Test leached and unweathered

	SPECIMEN #	FLAME DURATION (SEC.)	CHAR LENGTH (mm.)	FLOOR FLAMES (SEC.)
W	1	0	77.00	0
	2	0	87.00	0
	3	1	86.00	0
	4	0	93.00	0
	5	1	68.00	0
L	6	0	67.00	0
	7	0	81.00	0
	8	1	77.00	0
	9	0	76.00	0
	10	1	87.00	0
	AVERAGE	0.40	79.90	0.00

Small-Flame Test unleached and weathered

	SPECIMEN #	FLAME DURATION (SEC.)	CHAR LENGTH (mm.)	FLOOR FLAMES (SEC.)
W	1	1	75.00	0
	2	0	73.00	0
	3	0	83.00	0
	4	0	74.00	0
	5	0	73.00	0
L	6	0	80.00	0
	7	0	84.00	0
	8	0	86.00	0
	9	0	74.00	0
	10	0	76.00	0
	AVERAGE	0.10	77.80	0.00

Large-Flame

Large-Flame Test unleached and unweathered

	Specimen #	Afterflame Duration (sec.)	Floor Flaming (sec.)	Char Length (mm)
W	1	0	0	128.00
	2	0	0	123.00
	3	0	0	134.00
	4	0	0	142.00
	5	0	0	121.00
L	6	0	0	127.00
	7	0	0	133.00
	8	0	0	143.00
	9	0	0	125.00
	10	0	0	121.00
	Average	0	0	129.70

Large-Flame Test leached and unweathered

	Specimen #	Afterflame Duration (sec.)	Floor Flaming (sec.)	Char Length (mm)
W	1	0	0	124.00
	2	0	0	140.00
	3	0	0	126.00
	4	0	0	122.00
	5	0	0	141.00
L	6	0	0	124.00
	7	0	0	128.00
	8	0	0	134.00
	9	0	0	157.00
	10	0	0	138.00
	Average	0	0	133.40

Observations:
This sample met the requirements of CAN/ULC-S109-03, Flame Tests of Flame-Resistant Fabrics and Films, Section 4 Test Methods, Subsection 4.3 Small Flame Test and Subsection 4.4 Large-Flame Test.

6 Conclusion

Intertek has conducted testing for Serge Ferrari, on Précontraint 502 to assess the flame resistance performance. Testing was conducted in accordance with CAN/ULC-S109-03, Flame Tests of Flame-Resistant Fabrics and Films.

This sample met the requirements of CAN/ULC-S109-03, Flame Tests of Flame-Resistant Fabrics and Films, Section 4 Test Methods, Subsection 4.3 Small Flame Test and Subsection 4.4 Large-Flame Test.

The conclusions of this test report may not be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

INTERTEK

Reported by:

Sandy Osborne
Lab Technician II, Verification Center

Reviewed by:

Mark Crawford
Chemist Team Lead, Verification Center

7 Revision Summary

DATE	SUMMARY
June 28, 2013	Original Report