

CLIENT: University of Miami
1251 Memorial Drive
MEB 308, Coral Gables, FL 33146

On behalf of Fortress Stabilization Systems

Test Report No: TJ4114-1	Date: September 13, 2016
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SAMPLE ID: The client identified the following test material as “FSS-CFL-ITF-001”

SAMPLING DETAIL: Test samples were submitted to the laboratory directly by the client. No special sampling conditions or sample preparation were observed by QAI.

DATE OF RECEIPT: Samples were received at QAI facilities on July 29, 2016

TESTING PERIOD: August 29, 2016

AUTHORIZATION: Signed work order 16SP062401

TEST REQUESTED: Perform standard flame spread and smoke density developed classification tests on the sample supplied by the Client in accordance with ASTM Designation E84-16, "Standard Method of Test for Surface Burning Characteristics of Building Materials". The foregoing test procedure is comparable to UL 723, ANSI/NFPA No. 255, and UBC No. 8-1.

TEST RESULTS:	<u>Flame Spread</u>	<u>Smoke Developed</u>
	10	70

CLASSIFICATION: The material results could not be classified. Detailed test results are presented in the subsequent pages of this report.

Prepared By



Daniel Barnett
Project Engineer

**Signed for and on behalf of
QAI Laboratories, Inc.**



J. Brian McDonald
Operations Manager

PRODUCT DESCRIPTION:

Albi Cote FRL is a water-based, co-polymer intumescent coating, which provides excellent fire retardant properties. Albi Cote FRL is odor-free and offers the advantages of easy application and cleanup. This durable fire retardant coating provides a serviceable, wash-resistant flat finish for a wide variety of interior applications.

Designed for interior use, Albi Cote FRL is a quick

drying special coating that reacts to flame or heat at 3008 F (1498 C) by expanding into a thick multicellular insulating blanket. This intumescent carbonaceous foam sharply limits the spread of flame and insulates the surface to which it is applied. Albi Cote FRL provides a decorative, washable and mar-resistant finish like conventional paint, with the added advantages of a Class A fire retardant coating.

RECOMMENDED USES:

Albi Cote FRL is recommended as a decorative interior finish for the protection of combustible wall and ceiling surfaces such as wood, fiberboard, plywood, particle board, etc. and as supplementary low flame spread and low smoke density protection when applied to plaster,

gypsum wallboard, cinder block, etc. Albi Cote FRL is specially designed for application to combustible areas of public assembly such as restaurants, nursing homes, schools, corridors, stairwells, etc., where odor-free, quick drying features are desired.

TEST DATA & APPROVALS:

Albi Cote FRL has been tested by Underwriters' Laboratories, Inc. in accordance with ASTM E-84 (UL723) test procedures and is classified by UL, Inc. as providing Class A (0-25 flame spread) when applied to

Douglas Fir. As such, it is accepted by major building codes and insurance ratings organizations as an approved interior finish coating where such classification is required.

UL, INC. TEST DATA:

Surface	Douglas Fir	
Coverage (sq. ft. per gal.)	175	225
Flame Spread	5	5
Smoke Development	45	40

PHYSICAL PROPERTIES

DRYING TIME:	Air Dry – 30 minutes.	FLASH POINT:	Closed Cup - no flash.
RECOAT:	Two hours between coats.	SOLIDS BY WEIGHT:	62%-64%
PACKAGING:	1 gallon, 5 gallon and 55-gallon containers.	SOLIDS BY VOLUME:	52%-53%
COLORS:	White and standard colors	WEIGHT/GALLON:	10.4 to 11.4 lbs.
TINTING:	Universal Colorants not to exceed 2 oz per gallon.	WET FILM THICKNESS:	7.1 to 9.1 Mils
COVERAGE:	225 - 175 sq. ft. per gallon.	DRY FILM THICKNESS:	3.7 to 4.8 Mils
THINNER:	Water	VISCOSITY:	80 - 90 Krebs Units
		CLASSIFICATION:	Class A

ARCHITECTURAL SPECIFICATIONS:

SURFACE PREPARATION: All surfaces must be clean, dry, and free of grease or any surface contamination that will impair or prevent proper adhesion. Repair cracks or gouges with spackling compounds or wood putty. Sand Smooth and remove all dust. On glossy surfaces, sand lightly to provide “tooth.” For new wood or porous surfaces, prime with Albi 490W. For metal surfaces, clean and prime with rest preventative metal primer such as Albi 490W.

MATERIAL: Fire retardant coating shall be Albi Cote FRL as manufactured by Albi Manufacturing, Division of StanChem, Inc. or approved equal. Fire retardant coating shall be tested and classified by Underwriters’ Laboratories, Inc. offering evidence of Class A rating. Material shall be applied at the listed rate of coverage to conform to the UL classification and to the intent of this specification.

APPLICATION: Apply Albi Cote FRL in one or multiple coats to achieve specific coverage rate, assuring compliance with intent of specifications. Albi Cote FRL can be applied by conventional air, airless spray, brush or roller. For spraying consistency, thin with water not to exceed one half pint per gallon. Where there is a specified need for a deep tone decorator finish or wash ability, specify UL classified fire inert topcoat – Albi Cote TC Latex Semi Gloss.

Write for further test information on Albi-Cote FRL or our complete line of fire retardant coatings and fireproofing systems. Or you may visit our web site: www.albi.com.

SAFETY PRECAUTIONS:

Avoid contact with eyes and skin. Use with adequate ventilation. Do not apply at temperatures below 50 degrees F. Keep material from freezing. For safety information on Albi Cote FRL please request the current Safety Data Sheet.

PRODUCT DESCRIPTION:

Albi Cote FRL-X is a water-based, co-polymer intumescent fireproofing coating, which provides excellent fire-retardant properties. Albi Cote FRL-X is odor-free and offers the advantages of easy application and cleanup. This durable fire-retardant coating provides a serviceable, wash-resistant flat finish for a wide variety of interior applications. Designed for interior use, Albi Cote FRL-X is a quick drying special coating that reacts to flame or heat by expanding into a thick multicellular insulating blanket. This intumescent carbonaceous foam sharply limits the spread of flame and insulates the surface to which it is applied. Albi Cote FRL-X provides a decorative, washable and mar-resistant finish.

TEST DATA:

Albi Cote FRL-X has been tested by Underwriters' Laboratories, Inc. in accordance with ASTM E-84 (30-minute extension and UL 723), CAN/ULC S102 and ASTM E-2768. The FRL-X is certified for use in the United States and Canada. FRL-X is accepted by major building codes and insurance ratings organizations as an approved interior finish coating where such classification is required.

10 minute burn Class A rating. ASTM E-84; 1 coat @ 171 sq. ft. per gallon. (9.2 mils WFT AND 4.5 mils DFT). 30 minute burn Class A rating. ASTM E-84; 2 coats @ 148 sq. ft. per gallon (10.7 mils WFT and 5.2 mils DFT).

RECOMMENDED USES:

Albi Cote FRL-X is recommended as a decorative interior finish for the protection of combustible wall and ceiling surfaces such as wood, fiberboard, plywood, particle board, etc. and as supplementary low flame spread and low smoke density protection when applied to plaster, gypsum wallboard, cinder block, etc. Albi Cote FRL-X is specially designed for application to combustible areas of public assembly such as restaurants, nursing homes, schools, corridors, stairwells, etc., where odor-free, quick drying features are desired.

TEST APPROVALS:

PHYSICAL PROPERTIES:**DRYING TIME:** Tack Free 30 min

Recoat 4 Hours

RECOAT: Two hours between coats.**PACKAGING:** 1 gallon, 5 gallon and 55-gallon containers.**COLOR:** White**TINTING:** Universal Water-based Colorants
not to exceed 2 oz per gallon.**GLOSS/SHEEN:** Flat (< 10 @ 60°)**FLASH POINT:** Closed Cup - no flash**SOLIDS BY WEIGHT:** 61 (± 1) %**SOLIDS BY VOLUME:** 48 (± 1) %**WEIGHT/GALLON:** 11.3 (± 0.2) lbs**WET FILM THICKNESS:** 10.7 Mils**DRY FILM THICKNESS:** 5.2 Mils**VISCOSITY:** 90 - 105 Krebs Units**FLAME SPREAD RATING:** Class A**VOC** < 50 gram/liter**ARCHITECTURAL SPECIFICATIONS:**

SURFACE PREPARATION: All surfaces must be clean, dry, and free of grease or any surface contamination that will impair or prevent proper adhesion. Repair cracks or gouges with spackling compounds or wood putty. Sand smooth and remove all dust. On glossy surfaces, sand lightly to provide “tooth.” For metal surfaces, clean and prime with rust preventative metal primer such as Albi 490W or equivalent.

MATERIAL: Fire retardant coating shall be Albi Cote FRL-X as manufactured by Albi Protective Coatings, Division of StanChem Polymers. Fire retardant coating shall be tested and classified by Underwriters Laboratories in accordance with ASTM E-84 (30-minute extension and UL 723), CAN/ULC S102 and ASTM E-2768 Class A flame spread rating. Material shall be applied at the listed rate of coverage to conform to the UL classification and to the intent of this specification.

APPLICATION: Apply Albi Cote FRL-X in one or multiple coats to achieve specific coverage rate, assuring compliance with intent of specifications. Albi Cote FRL-X can be applied by conventional air, airless spray, brush or roller.

SAFETY PRECAUTIONS:

Avoid contact with eyes and skin. Use with adequate ventilation. Do not apply at temperatures below 50° F. Keep material from freezing (32° F). Do not store material at temperatures greater than 90° F. For safety information on Albi Cote FRL-X please request the current Safety Data Sheet.

