

# GRANT HAYS ASSOCIATES

ARCHITECTURE ✚ INTERIOR DESIGN

## SUBMITTAL REVIEW

DATE: April 30, 2013

TO: Mason Rowell – Landry & French

FROM: Michael F. Hays, R.A.

RE: Allagash Brewing Company Addition  
Retail Area Fireproofing

CC: file

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Submittal #: Hilti Firestop Systems – CP 606 Flexible Sealant  
Albi Clad TF Spray-Applied Fire Coating

Action Taken: Reviewed

Checking is only for conformance with design concept of the project and compliance with the information given in the contract documents. Corrections or comments made on the shop drawings during this review do not relieve the Contractor from compliance with the requirements of the drawings and specifications. Approval of a specific item shall not include approval of an assembly of which the item is a component. Contractor is responsible for: dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of his or her work with that of all other trades; and for performing all work in a safe and satisfactory manner.



Ontario Airport  
Ontario, CA  
Photo: Ed Thomas

- Water-based, Thin-film Intumescent Fireproofing
- Architectural Finish for Exposed Interior Structural Steel
- Complies with All VOC Air Quality Standards
- UL Classified for Up to 3-1/2 Hours



## DESCRIPTION

Albi Clad TF (Thin Film) is a water-based intumescent material for interior structural steel. Unlike ordinary fireproofing, Albi Clad TF is applied at minimum thickness and requires no reinforcement. It represents a breakthrough in interior fire protection. Albi Clad TF is spray-applied and offers up to 3-1/2 hours fire protection. Architects and other specifiers can use Albi Clad TF as an attractive interior finish, but still conform to building codes and insurance requirements.



Reading Terminal Market  
Philadelphia, PA  
Photo: C. Geoffrey Berkin

## ALBI CLAD TF ADVANTAGES

- UL Classified for 1 to 3-1/2 hours to ASTM E119
- Water based: solvent and asbestos free
- Lightweight, thin-film application
- Maintains contour of substrate
- Architectural, decorative finish
- Factory formulated, single component
- UL tested for resistance to high humidity, aging, industrial atmosphere (CO<sub>2</sub>/SO<sub>2</sub>), chlorine and washing

## WHERE TO SPECIFY

Albi Clad TF is applied in commercial buildings where architectural designs call for an aesthetic, thin, decorative finish. Albi Clad TF is ideal for interior steel columns, beams, tubes, trusses and other exposed structural members.

## PROVEN PERFORMANCE

For over four decades, Albi fireproofing materials have demonstrated superior performance worldwide in a range of extreme environments. Lightweight, ultrathin Albi Clad TF delivers long-term protection with outstanding hardness and durability. Albi Clad TF is the first water-based, thin film intumescent fireproofing material classified by Underwriters Laboratories, Inc. UL's rigorous environmental and laboratory testing procedures assure you of a durable, high-performance intumescent fireproofing product.

# ALBI CLAD TF FIRE-RESISTANCE RATINGS

FIRE TEST ASTM E-119

TYPICAL SYSTEM	HOURLY RATING	THICKNESS (dft)	DESIGN NUMBER
<b>BEAM</b>			
W8 x 31	1 Unrestrained	0.090"	ULI N607
W8 x 31	1.5 Restrained	0.090"	ULI N607
<b>COLUMNS</b>			
W8 x 24	2	0.313"	ULI X625
W10 x 49	1	0.055"	ULI X625
	1.5	0.132"	ULI X625
	2	0.31"	ULI X625
	2.5	0.43"	ULI X625
	3	0.55"	ULI X625
W12 x 120	3.5	0.67"	ULI X625
	1.5	0.108"	ULI X625
	2	0.192"	ULI X625
8" Pipe	Schedule 60	1	0.12"
	Schedule 60	1.5	0.23"
	Schedule 60	2	0.37"
	Schedule 60	2.5	0.52"
	Schedule 60	3	0.66"
	Schedule 100	3	0.625"
4" x 4" x 3/8" Tube	2	0.431"	ULI X638
8" x 8" x 1/2" Tube	2	0.334"	ULI X638
12" x 12" x 5/8" Tube	2	0.265"	ULI X638

## EASY APPLICATION

Apply Albi Clad TF directly from the shipping container by means of standard or airless spray equipment. The fire endurance rating specification determines the thickness of the coating. Alibi Clad TF must be applied by qualified, factory-trained applicators in accordance with the manufacturer's printed instructions, and in compliance with specific test requirements. As a water-based compound, Albi Clad TF must be protected from freezing during shipping, storage, application and curing. Contact the manufacturer for specific application parameters.

## TYPICAL INSTALLATIONS

- Hospitals
- Hotel Atriums
- Warehouses
- Parking Garages
- School Gymnasiums
- Clean Rooms
- Convention Centers



Hill Career School  
New Haven, CT  
Photo: Robert Perron



Albi Clad on square hollow section  
Conventional fireproofing on vertical support steel  
Hill Career School  
New Haven, CT  
Photo: Robert Perron

## PHYSICAL PROPERTIES

Dry Applied Density	85 PCF
Shore A Hardness	85 - 90
Weight per Gallon	11.90 ± 0.20 lb./gal
% Solids by Weight	70 ± 2.0
Abrasion Resistance	ASTM D1044 – .90 gram loss
Impact	ASTM D256 – 0.77 ft. lb/inch of notch
Flame Spread	ASTM E84 – 2 (Class A)
Smoke Development	ASTM E84 – 5 (Class A)
Shelf Life	12 months from date of manufacture if stored between 60° and 90°F under normal warehouse conditions.



### Other Albi TF Literature

- Albi Clad TF Long Form Guide Specification
- Albi Fireproofing Catalog
- Albi Clad TF Field Application Manual

Also inquire about these fireproofing products from Albi:

#### Albi Clad 800

Intumescent fireproofing, withstands severe weathering and abuse

#### Albi DriClad

Low-cost, uniform density mineral board that installs dry year-round



## ALBI MANUFACTURING

For more than four decades, Albi fireproofing materials have demonstrated superior performance and reliability under a range of extreme environments worldwide. These proprietary formulations also meet global building codes and insurance requirements. Lightweight Albi materials provide long-term protection, outstanding durability, aesthetic properties and are completely free from asbestos.



**Albi Manufacturing**  
Division of StanChem, Inc.  
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<sup>1</sup> A wholly-owned subsidiary of StanChem, Inc.



Albi Clad TF is a water-base intumescent thin film fireproofing material for use wherever interior fireproofing will be exposed to view or be subject to potential damage from external sources. This hard, durable, abrasion resistant product has a smooth, aesthetic finish. Albi Clad

TF is ideal for application in occupied areas or other locations where solvent-base fireproofing materials cannot be used. Because of its water-base formulation Albi Clad TF is fully compliant with EPA VOC limits and regulations.

**RECOMMENDED USES:**

Albi Clad TF is recommended for interior use on structural steel columns and beams in areas such as:

- Industrial plants
- Atriums
- Hospitals
- Parking Garages
- Food Processing Plants
- Convention Centers
- Correctional Facilities
- Power Generating Facilities
- Warehouses
- School Gymnasiums
- Computer Chip Manufacturing
- Sports Stadiums

**FEATURES:**

- Factory formulated, single component.
- UL tested for resistance to high humidity, heat aging, CO<sub>2</sub>/SO<sub>2</sub> industrial atmosphere, chlorine and washing.
- Thin film application.
- Lightweight & hammer-hard.
- UL listed for 1 through 3-1/2 hours to ASTM E-119.
- Water-based.
- Attractive off-white finish.
- 100% Asbestos Free.
- Will not dust, flake, nor delaminate.

**APPLICATION:**

Albi Clad TF is spray applied directly from the shipping container. It is important to specify metal primers that are compatible with Albi Clad TF. For application sites subjected to chemical fumes or spills, the use of a topcoat is required. Contact Albi Manufacturing for recommended primers and topcoats. Do not apply Albi Clad TF below 50 degrees F. Care must be taken to protect the material from direct rainfall. Please refer to the Albi Clad TF

Fireproofing Application Manual and Field Guide for further details. Thickness of the application will depend upon the fire endurance rating specified. Albi Clad TF must be applied by qualified, factory-trained applicators, utilizing standard, heavy-duty, pneumatic or airless, spray equipment. Installation must be in accordance with manufacturer's printed instructions, and in compliance with specific test requirements.

**PHYSICAL PROPERTIES:**

PROPERTY	TEST METHOD	VALUE
Dry Applied Density		85 PCF
Hardness	Shore D	45-50
Compressive Strength	ASTM D695-91	300 psi
Bond Strength	ASTM D952-90	40 psi
Abrasion Resistance	ASTM D1044-90	0 grams loss
Impact	ASTM D256-90b	0.77-ft lbs./inch of notch
Weight per Gallon		11.90 ± 0.20 lbs./gals
% Solids by Weight		70% ± 2.0%
Flame Spread	ASTM E 84	2 - Class A
Smoke Developed	ASTM E 84	5 - Class A

**WARRANTY**

LIMITED WARRANTY/LIMITATION OF LIABILITY: Seller warrants that its products will meet the specifications which it sets for them. Seller's responsibility under this warranty will be limited solely to replacing the products which prove defective, provided that Buyer gives Seller prompt notice in writing of said defect and satisfactory proof thereof. Products may be returned to Seller only after written authorization has been obtained from Seller. The foregoing warranty is in lieu of all other warranties, whether oral, written, express, implied or statutory. IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WILL NOT APPLY. Technical or other advice is furnished by us solely as an accommodation and shall not increase the scope of our responsibilities or liability. Seller's warranty obligations and Buyer's remedies hereunder are solely and exclusively as stated herein: In no event will Seller be liable either for the labor and other associated costs incurred in replacing the product, including, but not limited to, its removal and application, or for other incidental or consequential damages.



# Albi

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## ALBI CLAD TF (Product Data Information)

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### SUGGESTED SPECIFICATION

**1.0 SCOPE** This specification covers requirements for materials, equipment and application of intumescent mastic to provide fire protection to steel structures and supports as indicated on the design drawings, and in accordance with applicable requirements of contract documents. Further, this specification shall be supplemented by the applicable requirements of building codes, insurance rating organizations and all other authorities having jurisdiction.

**1.1 QUALIFICATION OF SUBCONTRACTORS** Application of Albi Clad TF fireproofing shall be performed by qualified, factory-trained applicators having proper equipment and training to complete the installation in accordance with manufacturer's recommendations. Proof of such qualification shall be submitted with bid documents.

#### 1.2 SURFACE ACCEPTABILITY

**1.2.1** Albi Clad TF intumescent mastic shall be directly applied to surfaces that have been properly prepared to receive this fireproof coating. The surfaces must be clean and dry, free from rust, grease, dust or other contaminants that will interfere with proper bonding.

**1.2.2** All steel surfaces shall be primed with compatible metal primer prior to fireproofing application. Phenolic modified alkyd primer (Albi 487S) or acrylic (Albi 490W) or approved equal.

**1.2.3** Where existing painted steel is to be fireproofed with intumescent mastic, existing paint surface must be checked for compatibility with intumescent coating prior to fireproofing application. Follow mastic fireproofing manufacturer's instructions for compatibility check.

#### 1.3 COORDINATION WITH OTHER TRADES

Albi Clad TF shall be installed after all steel is in place, but before ducts, pipe work, equipment or other obstructions are installed so that fireproofing can be applied to all exposed steel.

#### 1.4 DELIVER & STORAGE

Albi Clad TF shall be delivered to the jobsite in factory sealed containers.

### 2.0 FIREPROOFING

Fireproofing shall be applied in accordance with drawings or specifications, and shall conform to fire protective ratings as outlined by ASTM E-119 and listed by Underwriter's Laboratories, Inc.

#### 2.1 COATING

Intumescent mastic fireproof coating for interior use shall be Albi Clad TF as manufactured by Albi Manufacturing, Division of StanChem, Inc. 401 Berlin Street, East Berlin, Connecticut, USA, 06023.

#### 2.2 TOPCOATING

Overcoating is not required with Albi Clad TF. However, if a topcoat is required for color-coding, aesthetics or additional surface protection against spills, a suitable topcoat shall be used. For unusually severe environments consult the fireproofing manufacturer for recommendations of appropriate topcoats.

### 3.0 INSTALLATION & WORKMANSHIP

#### 3.1 AIRLESS SPRAY EQUIPMENT - PUMPS

Due to the properties of Albi Clad TF, we recommend application with airless spray equipment. This equipment is manufactured and distributed by leading pump manufacturers including:

#### Brand / Model

Speeflo - Titan 5500 gas or electric operated

Speeflo - Titan Epic Series 1200 HPG Gas

Graco - Gmax 5900, 7900, or 10000 Gas Operated

#### HOSES

Material lines for airless application must be rated at a minimum 3,000+ psi working pressure with a 3/8 inch inside diameter. Hose length should not exceed 150 feet without consulting Albi Manufacturing.

#### SPRAY GUNS / SPRAY TIPS

##### Brand / Model

Binks - 1M Airless

Graco - Contractors Airless

Titan - SGX-20 Airless

Wagner - G-10N Airless

##### Brand / Model

ASM - Zip Tips

Graco - Airless Tips

Titan - Airless Tips

You should always have a range of tip sizes on hand at a job site since steel sizes, hose length, vertical lift, and job site conditions all impact spray patterns. We recommend a range of tip sizes from 419-423 & 519-523.

**3.2** Final dry film thickness application must conform to manufacturer's listed design or to recommendations for specified rating.

**3.3** Small patchwork or damaged areas may be hand-trowelled or gloved. When hand trowelling, tools must be kept wet with water to avoid sticking.

#### 3.4 THICKNESS OF APPLICATION

Albi Clad TF shall be applied to the thickness required in accordance with the acceptable test data. Thickness shall be measured on the basis of wet film thickness taken by frequent random probe measurements during application. All test data measurements are taken on dry film thickness, supervision of application must be undertaken while material is being installed, since final, cured, dry film thickness will reflect shrinkage due to evaporation of water.

#### 3.5 SAMPLE APPLICATION

Before proceeding with the work, the applicator shall apply a section of approximately 100-sq. ft. (9.3 sq. meters) area. This section shall be witnessed by architect or owner's representative and shall be subject to their approval to be used as guide for texture and thickness of the finished work.

#### 3.6 CLEAN UP

Work area shall be maintained in an orderly condition with good housekeeping conditions prevailing. Upon completion of installation, all debris shall be cleared and removed from jobsite.

#### 3.7 GUARANTEE

**3.7.1 Manufacturer** shall warrant material to conform to its specification, and be free of manufacturing defects for a period of six months.

**3.7.2 Applicator** shall guarantee that the installation of material conforms to manufacturer's recommendations and project specifications, and shall further guarantee the workmanship connected with the installation for a period of one year from date of installation

Rev: 12/00

## WARRANTY

LIMITED WARRANTY/LIMITATION OF LIABILITY: Seller warrants that its products will meet the specifications which it sets for them. Seller's responsibility under this warranty will be limited solely to replacing the products which prove defective, provided that Buyer gives Seller prompt notice in writing of said defect and satisfactory proof thereof. Products may be returned to Seller only after written authorization has been obtained from Seller. The foregoing warranty is in lieu of all other warranties, whether oral, written, express, implied or statutory. IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WILL NOT APPLY. Technical or other advice is furnished by us solely as an accommodation and shall not increase the scope of our responsibilities or liability. Seller's warranty obligations and Buyer's remedies hereunder are solely and exclusively as stated herein: In no event will Seller be liable either for the labor and other associated costs incurred in replacing the product, including, but not limited to, its removal and application, or for other incidental or consequential damages.