Albi Clad TF

FIREPROOFING APPLICATION MANUAL & FIELD GUIDE

Delta T Control Inc.
PO Box 174
Wembley Alberta
Canada
Tel: (780) 539-5161
Fax: (780) 766-2285
www.deltatcontrol.com

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INTRODUCTION

Throughout the years, Albi has earned an enviable reputation for its dependable, high quality fireproofing systems. Providing maximum protection with minimum thickness, Albi thin film fireproofing has demonstrated a unique ability to withstand abuse, impact, vibration and adverse environmental conditions, while still continuing its outstanding performance record and aesthetic properties.

This manual has been prepared to provide you with basic information pertinent to the properties and application methods of Albi Clad TF. Further, equipment recommendations and application suggestions are included to assist you and your job superintendent in proper job preparation and professional execution of work. The objective of this manual is to explain the necessary components and methods to provide the required fire protection as specified by the owner or architect.

It is your responsibility, as a competent and reputable applicator, to apply the product in accordance with ULI tests and in compliance with our recommendations. It is important that you have full knowledge of our product and its application methods in order to maintain our record of proven performance and consistent customer satisfaction. We urge your studied review of the information contained in this manual and the transmission of this same information to all personnel who will be involved in the application of Albi Clad TF.

As additional information is developed, it will be forwarded to you for insertion in this manual. Should you desire additional copies, or should there be questions requiring clarification, please contact our home office or your local representative.

ALBI PRODUCT DESCRIPTION

ALBI CLAD TF

Albi Clad TF is a proprietary water based formulation consisting of acrylic-based resins, binders, and intumescent agents. It is factory formulated for maximum quality control, and is shipped in 55-gallon (U.S.) drums or 5-gallon (U.S.) pails. Albi Clad TF is applied directly from the shipping containers, requiring no special additives or field mixing procedures other than initial mechanical agitation to uniformly suspend the material in the drum. Albi Clad TF CONTAINS NO ASBESTOS, and is available in both spray and trowel grades to suit the desired end use requirements. Albi Clad TF meets the fire test criteria of ASTM E84, ASTM E119, and UL263.

Formulated for interior applications wherever fireproofing material is to be left exposed. Use where a hard, smooth-surfaced, thin architectural, coating is required and/or where heavy service abuse is anticipated. Observe standard professional painting practices for the application of water-based coatings. This product is water based and must be protected from freezing during transport, storage, and application. Adequate ventilation must be provided.

ALBI 487S PRIMER

Since Albi Clad TF is not formulated to function as a surface sealer or moisture barrier, a compatible primer is required as protection against corrosion of steel substrates. Albi 487S is a phenolic modified alkyd primer recommended for use with Albi Clad TF under most conditions. Albi 487S should be allowed to cure for at least 48 hours prior to application of Albi Clad TF. For complete product description refer to the Albi 487S product data sheet.

ALBI 490W PRIMER

Since Albi Clad TF is not formulated to function as a surface sealer or moisture barrier, a compatible primer is required as protection against corrosion of steel substrates. Albi 490W is a water borne; acrylic based primer recommended for use with Albi Clad TF under most interior conditions. Albi 490W should be allowed to cure for at least 48 hours prior to application of Albi Clad TF. For complete product description refer to the Albi 490W product data sheet.

FIBERGLASS RIBBON

Fiberglass ribbon is used for exposed flange edge protection as required for specific U.L. listings. This fiberglass ribbon comes in 150-foot rolls; 5-1/2 " and 12 " wide 20 X 20 mesh with a .004" fabric thickness, weighing 1.6 oz. per square yard. Other widths are also available.

EQUIPMENT RECOMMENDATIONS

AIRLESS SPRAY EQUIPMENT

PUMPS

Because Albi Clad TF is a heavy-bodied paint, we recommend application with airless spray equipment. This equipment is manufactured and distributed by leading pump manufactures including:

Brand / Model

Speeflo - Titan Power Twin 5500 gas or electric operated.
Speeflo - Titan Epic Series 1200 HPG Gas Operated
Graco - Gmax 5900 Gas Operated
Graco - Gmax 7900 Gas Operated
Graco - Gmax 10000 Gas Operated

HOSES

Material lines for airless application must be rated at a minimum 3000 + psi working pressure with a 3/8 inch inside diameter. Hose length should not exceed 150 feet without consulting Albi Manufacturing.

SPRAY GUNS

Brand / Model

Binks 1M Airless
Graco Contractors Airless
Titan SGX-20 Airless
Wagner G-10N Airless

SPRAY TIPS

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.

SPARE PARTS AND ACCESSORIES

To reduce additional job application start-up or down time expenses due to equipment failure, the following spare parts and accessories are recommended:

1. Sufficient tools in the form of long handled screwdrivers, wrenches, hose clamps, etc. to allow for quick maintenance checks and repairs in the field.
2. Extra 50 ft. section of material hose
3. Sufficient supplies of empty 5-gallon pails to allow for cleaning of pump and material hose with water flushing.
4. A recommended spare parts kit as published by the pump manufacturer
5. Spare material and air hose connectors (including swivel end connectors).

MISCELLANEOUS EQUIPMENT

The following items are recommended for use or storage on the job for optimum job production:

1. Sufficient masking paper and tape as well as non-absorbent masking cloths to prevent or minimize overspray on finished surfaces or equipment.
2. Movable scaffolding as required.
3. Barrel or drum handling equipment to facilitate moving of Albi Clad TF. (A 55-gallon drum of Albi Clad TF weighs approximately 600 pounds).
4. OSHA Approved Safety Equipment
5. Thickness measuring gauges to assure adequate wet and dry film thickness.
6. Fiberglass ribbon (as required for specific applications).
7. Supply of good quality foam paint rollers and 3 (three) or 4 (four) inch tapered polyester brushes.
8. Trowel and protective gloves for patch up work, and for trowelling or palming material in areas difficult to reach with spray application equipment.
9. Mechanical mixing of Albi Clad TF is required to assure uniformity of blended ingredients and proper material viscosity. For best results, use of an air operated motor or electric mixer is recommended.

SURFACE PREPARATION

The surface to receive Albi Clad TF must be properly prepared in accordance with good painting practice. The surface must also be clean of all residual oil, moisture, dust, frost or other contaminates that may have formed. In areas where spot rusting has occurred, be sure all loose rust, scale, etc. is removed. Spot prime all bare steel areas with a compatible primer.

PRIMERS

To provide proper protection against corrosion, all steel must be primed with a proven compatible primer. If either Albi 487S or 490W is used as the primer, allow at least 48 hours for thorough drying and curing before applying the Albi Clad TF.

Before commencing work it is vitally important to determine the compatibility of Albi Clad TF with the primers. Please contact Albi Manufacturing for further details.

Albi 487S - phenolic modified alkyd primer.
Albi 490W - rust inhibitive acrylic primer

Incompatible primer must be removed by acceptable techniques and subsequently primed with an acceptable primer. One technique recommended is commercial blast cleaning as outlined in the Steel Structure Painting Council (SSPC).

AIRLESS APPLICATION

Prior to spraying, Albi Clad TF must be thoroughly mixed to a "smooth, creamy" consistency. Connect material line to gun. Adjust the pump pressure to the recommended range and choose an airless tip size, sized between .419 to .423 and .519 to .523. Increase or decrease pump pressure to achieve an even spray pattern. It is always best to spray at the lowest achievable pressure. If spray tip is constantly clogging, either raise the pump pressure in five-pound increments or change to the next larger size tip. Tip extensions with swivel ends can be used to reach inaccessible areas.

WARNING. AIRLESS EQUIPMENT SHOULD ONLY BE USED BY TRAINED AND EXPERIENCED PERSONNEL. ALL PERSONS WORKING WITH, OR AROUND, AIRLESS EQUIPMENT, MUST BE AWARE OF INJECTION HAZARDS.

EQUIPMENT OPERATION HINTS

If the pump fails to operate correctly, check the following points:

1. Check material pressure gauge to make sure they are operable.
2. Check material level in Albi Clad drum to be sure sufficient material is covering the inlet material orifice and no cavitation is occurring.
4. Check material inlet for possible malfunction or clogs.
5. It is important that all personnel involved in the use of the equipment be familiar with its operation and understand the manufacturer's recommendations for trouble shooting.

AIRLESS SPRAY APPLICATION

Mix the Albi Clad TF to a "smooth, creamy" consistency just prior to starting the spray application. Hold the spray gun a comfortable distance from the work. The trigger on the gun can be pulled continuously or intermittently to allow an even application of the material. The film thickness can be built up to 80 - 100 mils per coat. This is best achieved through multiple passes to achieve an even application. The higher film builds per coat tend to impair the product finish. For example when applying Albi Clad TF a better finish can be achieved by applying the material in multiple coats.

As a general guide, wet film thickness coatings up to 300 mils can be built up in one day through multiple passes. Thickness applied during each pass will depend upon weather conditions and skill of the applicator. Higher film builds can result in mudcracks developing at the inside corners of the web and flange. While these can be easily repaired, if left untreated, produce a poor finished appearance.

It is important to recognize, as pointed out above, that this 300 mils total thickness application would be accomplished in multiple passes, each pass depositing up to 80 - 100 mils film thickness and allowing sufficient time lapse between passes to achieve skin drying. Application beyond the 300 mils total thickness in one day will increase the hazard of material sagging.

Where application calls for Albi Clad thickness greater than 300 mils, overnight drying of initial applied coating is required.

DOWN TIME AND CLEAN UP

When stopping work for a break, immerse the tip of the gun in water and cover the open drum to prevent the material from hardening. This will permit quick resumption of work without the need to clean the equipment.

When stopping work overnight or longer, as well as when the job is completed, place the pump equipment in a container of water. Clean the pump of residual Albi Clad material using an old brush or rag. Activate pump in order to cycle water, directing the material hose back into the water can. When the pump and material hose are thoroughly clean, cycle a water compatible solvent through the pump to help prevent rusting. Disconnect the material line and remove the gun for hand cleaning.

IMPORTANT APPLICATION PROCEDURES

1. **Cold Weather Application**. Because Albi Clad TF is water based, it cannot be applied, below 40 F. Also the following important points should be noted:

   a. It is imperative that the steel to which the material is being applied is also at or above 50 degrees F.

   b. Albi Clad TF MUST be stored in a heated area at or above 50 degrees F.

2. **Exterior Exposure.** Once fully cured, Albi Clad TF can withstand intermittent exposure to exterior conditions such as light rain and snow. It is however, important to recognize that Albi Clad TF is an interior product. As such it must be protected during the application and curing process from direct rain, freezing, etc. and should continue to be protected from exterior conditions including direct rain, snow, etc. until the building is weather tight. While light, intermittent exterior exposures will not adversely affect the TF it is impossible to anticipate all weather conditions for all job sites. Therefore it is our recommendation to provide continuous protection until the building is enclosed.

3. **Humid Application Conditions**. When applying Albi Clad TF in areas under high humidity conditions, it is important to note the following:

   a. Surfaces to be coated must be free from all residual moisture. Albi Clad TF should not be applied whenever the substrate surface temperature is less than 5 degrees F above the dew point of the surrounding air.

   b. Following good painting practice, Albi Clad TF should not be applied when the relative humidity exceeds 85%.

4. **Hot Weather Conditions**. When applying Albi Clad TF with high temperatures, coats must be thick enough to allow the water to remain on the steel long enough to obtain proper adhesion. High temperature environments accelerate water evaporation. The following important points should be noted.

   a. The temperature of the steel substrate should not be higher than 120 degrees F.

   b. Material should be stored in doors out of direct sunlight at less than 120 degrees F. If stored outdoors we recommend storing drums in the open in shaded areas, since the shipping containers can act like ovens.

5. **Albi Clad TF Finished Appearance**. Albi Clad TF serves both as a functional fireproofing material and the architectural finish. It can and should be applied to provide a neat acceptable finished appearance. Careless and sloppy workmanship always results in costly additional work and customer dissatisfaction. Albi Clad TF coating applied in uniform thickness, free from globs, sags, and craters can only result in greater acceptance and use of Albi products in the future since a satisfied customer is a repeat customer.

   a. The final appearance of the Albi Clad TF installation is directly dependent on the initial and subsequent spray coats. Build up the thickness slowly and uniformly through the use of successive passes. Building up the thickness too rapidly causes mudcracks, sagging and sliding.

   b. The required finish appearance of Albi Clad TF is easily and quickly achieved through the use of airless spray equipment. Surface irregularities and especially flange edges, can be smoothed by light rolling with a foam roller or brush immediately after spraying. Keep the roller or brush wet with water to avoid "picking up" the applied material.

   c. Where Albi Clad TF has dried hard, leaving globs or other unsightly areas, a surform or grinder can be used to correct or even out these areas.

6. **Small Jobs or Patch Areas.** For very small jobs, not allowing or justifying the use of airless spray application, application of Albi Clad TF can be made as follows:

   a. Albi Clad TF may be applied by trowel or palming method. Material is applied by a trowel thoroughly wetted with water. Do not work the Albi Clad TF too much, as it will tend to dislodge itself from the surface to which it is being applied.

   b. To repair damaged areas, first remove any loose particles. Then apply Albi Clad TF with putty knife.

7. **Coverage Guide.** Albi Clad TF exhibits coverage rates per gallon, which can be easily calculated utilizing a standard paint coverage equation. The formula is as follows:

$$\frac{1604}{\text{dry film thickness}} \times 0.70 \text{ (\% volume solids)} = \text{square ft. per gallon (at 100\% transfer efficiency)}$$

WARRANTY/GUARANTEE INFORMATION

Limited warranty/limitation of liability: Information and recommendations provided by Albi are based upon extensive test data, laboratory experiments and years of field experience believed to be reliable. Statements made herein as to coverage, drying performance, application, and other properties will vary according to the nature and conditions of the surfaces to which the product is applied.

Albi warrants that its products will meet the specifications that it sets for them. Albi's responsibility under this warranty will be limited solely to replacing the products which prove defective, provided that Buyer gives Albi prompt notice in writing of said defect and satisfactory proof thereof. Products may be returned to Albi only after written authorization has been obtained from Albi. The foregoing warranty is in lieu of all other warranties, whether oral, written, express, implied or statutory. **IMPLIED WARRANTIES OF MERCHANTIBILITY 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. Albi's warranty obligations and Buyer's remedies hereunder are solely as stated herein. In no event will Albi 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.

Applicator shall guarantee that its installation of material conforms to manufacturer's recommendations, and shall further guarantee his workmanship connected with the installation for a period of one year from the date of installation.