

Technical Services

Product: Forti-Lock™ Liquid Applied PMMA Flashing
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FiberTite Forti-Lock Liquid Flashing Application Guidelines

Introduction

Forti-Lock is a rapid-curing, proprietary formulation of polymethyl-methacrylate (PMMA) liquid resin which is used in combination with Forti-Lock Fleece reinforcing fabric to form a flexible and monolithic, reinforced membrane used for unusual FiberTite flashing and detail applications.

The use of Forti-Lock is restricted to unusual details where conventional FiberTite Details cannot be applied. Forti-Lock is an approved flashing material for I-Beams, C-Channels, low flashing terminations and other aberrant details that do not conform to conventional membrane flashing details. Only Forti-Lock materials and accessories will be approved as part of the FiberTite Commercial Warranty for authorized projects.

Forti-Lock does not substitute for preferred methods, materials and techniques currently used to flash penetrations. Preferred materials include standard injection molded boots, corners and 60-mil non-reinforced film for field fabrication.

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FiberTite Forti-Lock Liquid Flashing Application Guidelines

Pre-application/Preparation

Tools & Equipment:

Mixing & Preparation

- Plastic tarps or sheeting
- Clean mixing sticks
- Variable speed drill with ½ inch chuck
- 2 large spiral resin agitator/mixers
- 1 tablespoon (15 ml) measure
- Plastic mixing buckets (5 liter)
- Mixing pail (5 gallon)
- Reinforced masking tape
- Razor knife
- 9-inch scissors
- Disposable heavy-duty nitrile gloves
- Chalk line
- Tape measure
- Permanent marker
- Clean cotton rags
- Plastic garbage bags
- FiberTite Seam Cleaner

Application Tools

- 3-4 inch wide, ½" nap roller with round edges
- 2-4 inch Roller handles
- 2-4 inch disposable paint brushes

The applicator must assess jobsite conditions and determine specific needs for any individual application, including requirements for any special tools, permits or licenses. The tools and equipment recommended are based on normal practice in typical applications of FiberTite Forti-Lock supplied products.

Roof Conditions/Surface Preparation:

Surface preparation is critical to the performance of any liquid flashing.

Clean and prepare metal surfaces to near white metal. Extend preparation a minimum ½ inch (1.3 centimeters) beyond the termination of the membrane flashing materials. In addition to cleaning, all metal surfaces shall be abraded to provide a rough open surface. A wire brush finish is not acceptable.

Metal Surface Preparation:

- Remove existing paint and finishes etc. by mechanical means.
- Ensure that the prepared surface is clean, dry and free from dust, grease, oil and any other contaminants.
- Clean and abrade metal with a wire wheel or similar tool by mechanical means
- Wipe clean with FiberTite Seam Cleaner
- Extend prep a minimum of ½" beyond intended application areas for the material
- Remove all existing coatings and surface contamination
- Prime all metal surfaces with Forti-Lock Primer at specified application rate

Additional preparation for the FiberTite membrane surface shall include:

- Remove all dirt and debris
- Clean heavily soiled membrane with a light detergent and rinse clean and dry
- Wipe the surface clean with FiberTite Seam Cleaner and a green scratch pad to lightly abrade surface.
- Allow membrane surface to completely dry

FiberTite Forti-Lock Liquid Flashing Application Guidelines

Pre-application/Preparation (continued)

Environmental Conditions:

Generally, Forti-Lock components may be applied while ambient temperatures remain 5°F (3°C) above the dew point and air temperatures are between 32°F (0°C) to 95°F (35°C). Air, substrate and resin temperatures are all factors in the proper application of Forti-Lock components and must be considered to determine percentage of Forti-Lock Catalyst Powder addition, pot life and cure times.

Materials Preparation:

Forti-Lock components are generally packaged and applied by weight. Resin consumption for Forti-Lock components are provided by kg/ft² (kg/m²) with a comparative reference to kilograms per liter. For job site batch mixing Forti-Lock components can be reliably measured using sturdy, solvent resistant clear plastic mixing containers calibrated for measuring in liters or using any weight scale capable of reading grams or kilograms.

Using a slow-speed mechanical mixer, thoroughly stir the entire container of resin for two minutes prior to each use. Use a slow-speed mechanical mixer with spiral agitator or stirring stick taking care not to aerate and prior to pouring the resin into a secondary container (used for measuring and/or mixing).

Forti-Lock Fleece should be pre-cut prior to activation of Forti-Lock.

To activate the entire 12 kg can of Forti-Lock, add two and a half packets of Forti-Lock Catalyst and stir for two minutes using mixer.

Refer to individual Forti-Lock Product Data Sheets (PDS) for specific product application rates and consumption.

Application Guidelines

Primary Application Guidelines:

Catalyze only the amount of material that can be used within 10–15 minutes. Add pre-measured catalyst to the resin component, stir for 2 minutes before applying to substrate. Forti-Lock Catalyst Powder addition is based on the weight of resin being used and temperature.

After mixing, apply resin to clean and prepared substrate at the required consumption using rollers or brushes. The resin should be spread evenly onto the surface at specified application rate. Apply base coat of catalyzed Forti-Lock resin onto the substrate and immediately apply the Forti-Lock Fleece reinforcement into the wet base using appropriate pressure and then apply a resin topcoat fully encapsulating the fleece. Avoid any folds and wrinkles or air bubbles.

Note: Forti-Lock resin is applied at an approximate ration of 2/3 : 1/3 basecoat and topcoat respectively at the following consumption rates:

SUBSTRATE PROFILE	12 kg UNIT ft ² (m ²)	MINIMUM TOTAL CONSUMPTION kg/ft ² (kg/m ²)	BASE COMPONENT CONSUMPTION kg/ft ² (kg/m ²)	TOP COAT CONSUMPTION kg/ft ² (kg/m ²)	TOTAL THICKNESS mils (mm)	BASE COAT mils (mm)	TOP COAT mils (mm)
Smooth	43 (4.0)	0.28 (3.0)	0.18 (2.0)	0.1 (1.0)	98 (2.5)	66 (1.6)	32 (0.8)
Typical	39 (3.6)	0.31 (3.3)	0.21 (2.3)		106 (2.7)	74 (1.9)	
Granulated	34 (3.2)	0.36 (3.8)	0.26 (2.8)		122 (3.1)	90 (2.3)	
Rough	34 (3.2)	0.40 (4.3)	0.30 (3.3)		140 (3.5)	108 (2.7)	

FiberTite Forti-Lock Liquid Flashing Application Guidelines

Application Guidelines (continued)

Primary Application Guidelines (continued):

Allow Forti-Lock flashing to fully cure. Changing project conditions should be monitored throughout the day to adjust catalyst ratios and cure times.

The use of Forti-Lock resin requires reinforced flashings at the penetrations applied using Forti-Lock resin with Forti-Lock Fleece. Apply masking tape at the top edge termination and on the FiberTite membrane when Forti-Lock will be applied over an in-place field membrane. Forti-Lock Fleece can be easily cut into patterns and shapes using a sharp, clean pair of scissors. Each penetration or condition should be field measured, with the measurements transferred and marked onto the fleece accordingly. Once the pattern layout is complete, cut the fleece pattern to suit. Be sure to mark the topside of the fleece before cutting sections from the roll.

Precut Forti-Lock Fleece reinforcement as required prior to mixing and applying with Forti-Lock resin. The Forti-Lock Fleece should conform to penetrations being flashed. Ensure a minimum 2 in (50 mm) overlap of fleece at side laps and extend flashing horizontally onto deck as indicated on FiberTite Forti-Lock Details.

Apply another layer of Forti-Lock onto reinforcement to assure full saturation.

Apply second coat from the interior to exterior to limit voids or air pockets from forming. Second layer of Forti-Lock should be applied while the initial layer of Forti-Lock is still wet to ensure proper curing.

Fleece sections shall be 2-inches (5 centimeters). Finished detail should extend 8 inches (20 centimeters) out onto the FiberTite membrane and a minimum of 8 inches (20 centimeters) up the vertical plane. Refer to Forti-Lock Fleece details for additional information.

Refer to [FiberTite Forti-Lock \(FL\) detail drawings](#) for specific information and flashing requirements. Unless otherwise noted, all Forti-Lock applications require approval from FiberTite Technical Services prior to use.

Alternate Conditions:

FORTI-LOCK MEMBRANE

Aberrant Supports, Posts, and other Unusual Shaped Penetrations: Angles, I-beams must be separated with 1 in (25 mm) minimum clearance or as required to adequately waterproof each individual penetration. All penetrations must be flashed individually, not ganged together, using a Forti-Lock Fleece reinforced vertical wrap finger flashing and deck target skirt applied with Forti-Lock resin.

Clean Up:

Daily site cleanup shall be performed to minimize debris and hazardous congestion.

Technical Support

Support Documentation:

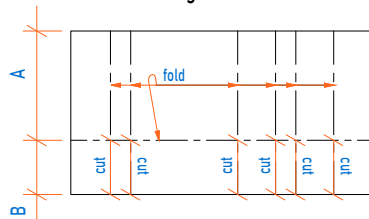
Forti-Lock Catalyst Mixing Chart

Amount of Forti-Lock resin	w/ 6% Catalyst 32°F (0°C) to 50°F (10°C)		w/ 4% Catalyst 50°F (10°C) to 68°F (20°C)		w/ 2% Catalyst 68°F (20°C) to 95°F (35°C)	
	TBSP	kg	TBSP	kg	TBSP	kg
12 kg can	7x 0.1 kg packets		5x 0.1 kg packets		2.5x 0.1 kg packets	
25 kg can	15x 0.1 kg packets		10x 0.1 kg packets		5x 0.1 kg packets	
1 kg	6	0.06	4	0.04	2	0.02
1.2 liter	7	0.07	5	0.05	2.5	0.03

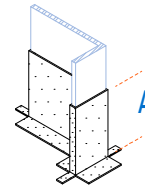
Forti-Lock Fleece Cut Diagrams:

fig 1 - Forti-Lock Fleece cut pattern for angle support

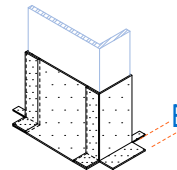
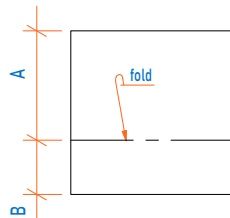
Step 1.
 Apply pre-cut finger flashings at column flange for both sides



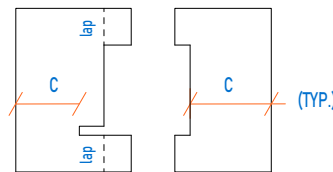
A - 8" Min.
 B - 2" Min.
 C - 8" Min.



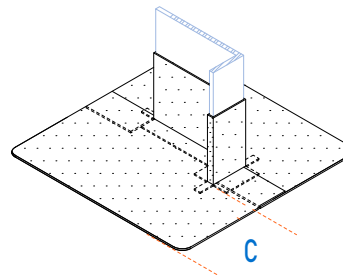
Step 2.
 Apply pre-cut finger flashings at column web for both sides



Step 3.
 Apply pre-cut target patch over finger flashings with 2" overlap



Round all Corners

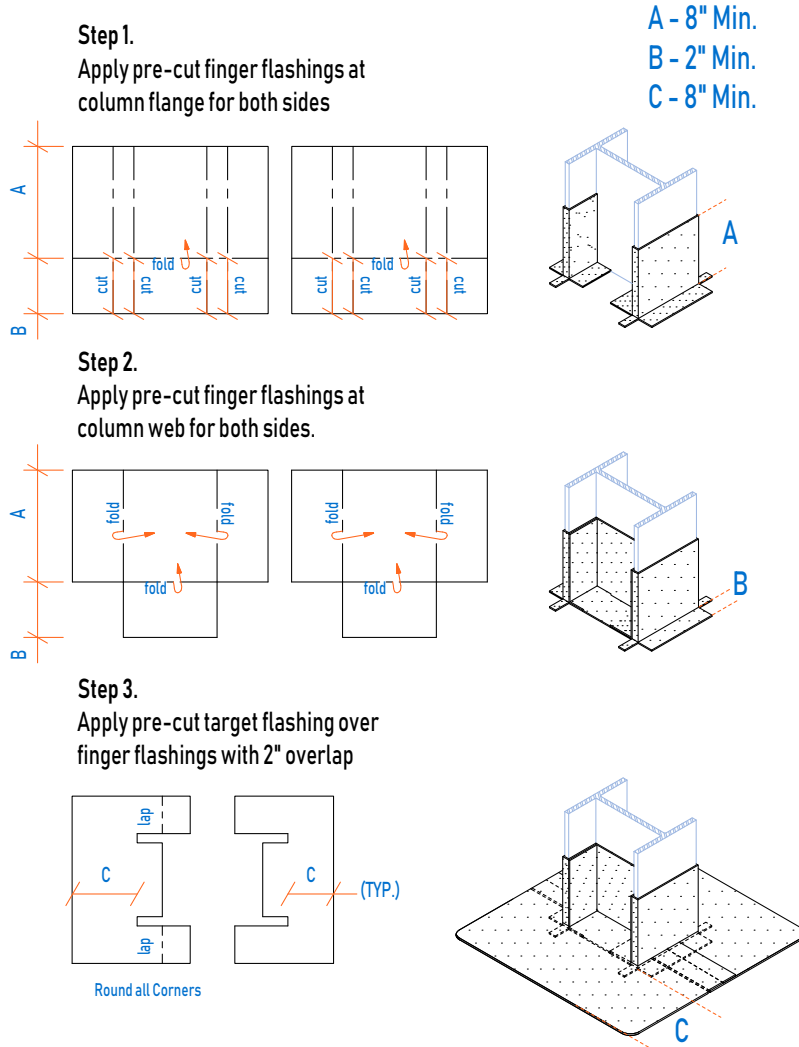


FiberTite Forti-Lock Liquid Flashing Application Guidelines

Technical Support (continued)

Support Documentation (continued):

fig 2 - Forti-Lock Fleece cut pattern for column support



For more information, or to contact a FiberTite Roofing specialist, visit www.FiberTite.com

References:

[Forti-Lock Liquid Flashing Construction Details](#)

[Forti-Lock Product Data Sheets](#)