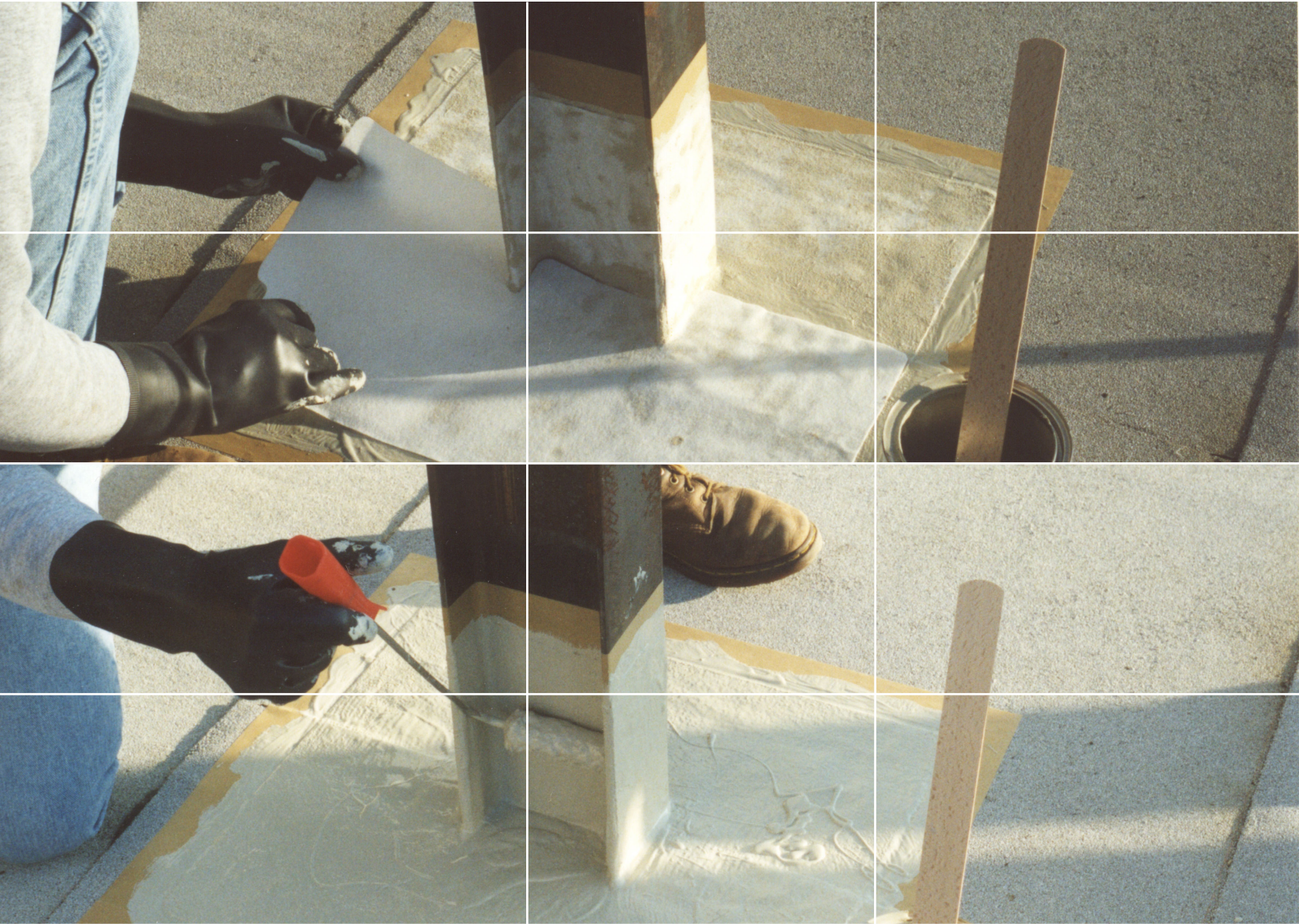




# Parapro 123 Flashing System



## Installer's Guide



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# I. System Overview and Products

## Siplast Parapro 123 Products

The Siplast Parapro 123 Flashing System is a liquid-applied flashing system designed for use in conjunction with SBS-modified bitumen and PMMA-based roofing and waterproofing systems. The Parapro 123 Flashing System is a layered application consisting of one coat of primer (where required depending on substrate conditions) and waterproofing layers of PMMA-based resin reinforced with polyester fleece.

Pro Products are used in conjunction with Parapro Flashing System components. Pro Products include Pro Primers, Pro Color Finish, Pro Paste, and Pro Catalyst. Pro Primers, Pro Color Finish, and Pro Paste are collectively referred to as Pro Resins in this Installer's Guide.

## Weather Restrictions

Do not apply any Parapro or Pro Resin products if there is a threat of precipitation, condensation is present on the substrate, or the ambient temperature is within 5°F of the dew point. Ambient and substrate temperatures affect the application of Siplast Parapro and Pro Resin materials. Ambient and substrate temperature guidelines and restrictions vary by product, and are noted in the product sections of this guide.

## The Parapro 123 Flashing System used with Siplast SBS-Modified Bitumen Roof Membrane Systems

The Parapro 123 Flashing System can be applied directly over standard Siplast SBS-modified bitumen roof systems that are applied by torch, hot asphalt, or SFT Adhesive. Alternatively, the Parapro 123 Flashing System can be installed between plies of Siplast SBS-modified bitumen roof systems applied by torch, hot asphalt, SFT Adhesive or solvent-based adhesive. Refer to the application instructions beginning on page 13 of this guide for step-by-step installation procedures.

Contact the Siplast Technical Department at 1-800-922-8800 for additional information.

# II. Personal Protection

## Safety and Protection

Refer to the Safety Data Sheet (SDS) for each Parapro and Pro Resin product for specific PPE information. Parapro and Pro Resins are flammable, and are harmful if inhaled, swallowed, or absorbed through the skin. They can cause skin, eye, and respiratory irritation, and may cause skin and respiratory sensitization.

Do not smoke around Parapro or Pro Products. Keep the products away from open flame, fire, or any ignition source. Avoid breathing Parapro or Pro Resin vapor and Pro Catalyst powder dust. Use the prod-

ucts with adequate ventilation or respiratory protection as needed to keep exposure below Threshold Limit Values (TLV) values. Do not ingest the products, and avoid contact with eyes, skin, and clothing. Wear suitable gloves and eye/face protection. Wash thoroughly after handling the products. Keep the products out of reach of children.

First aid information is available on Parapro and Pro Resin product SDS documents and product containers.

# III. Storage and Disposal

## Storage

Store Parapro and Pro Resin products indoors in closed containers in a well-ventilated, cool, dry area away from direct sunlight, heat, open fire, any ignition source, oxidizing agents, strong acids, and strong alkalis. Resin products may autopolymerize at temperatures greater than 140°F (60°C). Resin product shelf life is 6 months from ship date. The shelf life of resin products will be reduced if the products are stored at temperatures above 77°F (25°C). Pro Catalyst is

extremely heat sensitive. Proper storage is important to help ensure handling safety and product quality. To maintain product quality, the storage temperature of Pro Catalyst should not exceed 77°F (25°C). The reactivity/effectiveness of Pro Catalyst will decrease progressively when stored under high temperature conditions. Exposure to a temperature of 122°F (50°C) or higher can result in self-accelerating decomposition of Pro Catalyst. Self-accelerating decomposition is signaled by the presence of bright white smoke, and



can create temperatures in excess of 500°F (260°C), depending on the environmental conditions and quantity of catalyst present. Such temperatures can be hazardous in the presence of flammable materials. Therefore, Pro Catalyst should never be subjected to conditions that can result in self-accelerating decomposition.

Materials stored on the job site during application should be kept on a pallet in a shaded, well-ventilated area. In unshaded areas, materials should be covered with a white, reflective tarp in a manner that allows air

circulation beneath the tarp.

### **Disposal**

Incinerate or dispose of uncured or cured Parapro and Pro Products in accordance with Federal, State, Provincial, or Local regulations. Uncured resin, such as that present in pails or on lids, should be catalyzed to allow for disposal. Pro Catalyst can be added to, and mixed with, a Parapro or Pro Resin to facilitate disposal.

## **IV. Installation Materials, Tools, and Equipment**

### **Substrate Preparation**

- Blower, vacuum, and broom
- Hand grinder with carbide disk, diamond cup, or other appropriate abrasive wheel
- Shot blaster with dust collector/air pulse compressor
- Sandpaper
- Pro Prep or Pro Prep M
- Pro Primer  
(specific product chosen based upon substrate)
- Pro Paste

### **Mixing**

- Plastic tarps or sheeting
- Variable speed drill with 1/2-inch chuck
- Mixing agitator or stir sticks
- Jiffy Mixer
- 1-tablespoon measure  
(Included with Pro Catalyst powder & liquid)
- 1-cup measure  
(Included with Pro Catalyst Liquid)
- Plastic mixing buckets (2 or 3 liter with volume graduation marks in kg/liters)
- Battery operated scale

### **Application**

- Tape (masking, duct or gaffers tape)
- Margin trowel
- Application brushes - 2"-3" wide
- Application rollers - 4"-6" wide
- Heavy duty scissors
- Disposable butyl rubber or nitrile gloves

### **Miscellaneous**

- Clean cotton rags
- Infrared thermometer
- Tape measure
- Chalk line

## **V. Substrate Preparation and Repair**

### **General Substrate Preparation**

All substrates must be free from gross irregularities, loose material, unsound material, foreign material (such as dirt, ice, snow, water, grease, oil, release agents, paint coverings), or any other condition that would be detrimental to the adhesion of the catalyzed primer and/or resin to the substrate. Some surfaces may require shotblasting, scarification followed by shotblasting, or grinding to achieve a suitable substrate. Substrate preparation guidelines appear in the

chart below but it is important to note that requirements can vary for a particular situation. In applications where adhesion to a substrate not listed in the chart is required, please contact the Siplast Technical Department at 1-800-922-8800 for information on testing such substrates for adhesion by performing a field bond test.

Substrate	Preparatory Guidelines	Pro Primer W Required	Pro Primer T Required	Pro Primer R Recommended
Steel, Galvanized Steel, Lead	1, 2, 3, 4			
Stainless Steel, Copper, Aluminum	1, 2, 3, 4, 14			
Paint/Coating	7			
Concrete (horizontal)	1, 5, 15		•	
Concrete (vertical)	1, 5, 15	•		
Mortar	1, 5	•		
Polymer modified concrete, Repair mortars	1, 5, 8	•		
Clay, Ceramic Tiles, Brick, Block	1, 6	•		
Plywood (ACX), Wood	1	•		
DensDeck Prime, Securock® Cement Board, DEXcell® Cement Board	1, 9	•		
Mopping asphalt, Smooth-surfaced SBS modified bitumen, Hot rubberized asphalt	1, 10, 11, 13			
Paradiene 20	1, 12			12
Paradiene 30 and Parafor	1			11
Paradiene 20 P	1			11
Galvalume Coated Metal	Not approved as a substrate			

### Key to Preparation Guidelines

- Substrate must be clean and dry and free from gross irregularities, loose material, unsound material, or any foreign material (such as dirt, ice, snow, water, grease, bitumen/coal tar, oil, release agents, paint coverings), or any other condition that would be detrimental to the adhesion of the catalyzed primer and/or resin to the substrate.
- Remove rust or other oxidation layers.
- Abrade surface to bright finish prior to cleaning with Pro Prep. Do not use a wire-wheel for substrate preparation.
- Wipe down thoroughly with Pro Prep prior to application of resins. Allow Pro Prep a minimum of 20 minutes drying time after application before continuing. The next application process should be completed within 60 minutes of cleaning with Pro Prep.
- See substrate preparation and repair guidelines on pages 3 and 4.
- Grind surface to remove glaze. Tiles must be fully bonded to a sound foundation. Ensure that no moisture is present beneath tiles.
- All paint coverings and existing coatings must be removed.
- Refer to polymer concrete or repair mortar manufacturer's requirements for suitability for a specific application. Prepare by shotblasting or grinding to a minimum CSP-2. Contact Siplast for a list of approved concrete products.
- Tape all joints between panels and panel edges at all walls, perimeters, and penetrations using gaffer's tape before priming with Pro Primer W. Application of Siplast Pro Tape after priming with Pro Primer W is an acceptable alternative.
- Mopping asphalt residue should be removed from the primary substrate that will receive the Parapro Flashing materials.
- Priming is recommended over raw asphalt if aesthetics are a concern.
- While priming of the Paradiene 20 is not required, Pro Primer R can be applied to maintain a consistent aesthetic appearance to avoid bleed-through. Pro Primer R cannot be used over concrete or masonry and is not intended for use over asphalt contaminated roofing or flashing substrates.
- A peel test is recommended to ensure that adhesion is acceptable.
- Qualify/prepare substrate and prime with Rust-Oleum™ High Performance V2100 System Enamel Spray Primer (Rust-Oleum™ Part#V2182838 Flat Gray) in accordance with Rust-Oleum™ specifications.
- Concrete having an internal relative humidity in excess of 75% will necessitate the use of Pro Primer E.

## Substrate Preparation and Repair

### Cracks, Joints, and Small Indentations

Before application of the Parapro 123 Flashing System (and after priming if required), all joints, cracks, voids, fractures, depressions, and small indentations in the substrate must be filled. Siplast recommends the

use of the appropriate Pro Primer (if applicable) and Pro Paste for all such substrate repairs. The Parapro Flashing System may be applied immediately after the Pro Paste sets.

### **Substrate Leveling & Patching**

Following preparation and priming with the appropriate Pro Primer (if necessary), low areas may be leveled using Pro Paste.

### **Concrete & Masonry**

New concrete must be cured a minimum of 28 days in accordance with ACI-308 (or as recommended by the concrete manufacturer) and meet moisture content guidelines before the application of the appropriate Siplast PMMA-based Pro Primer. Moisture content can be measured using ASTM F2170 (Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes). The maximum relative humidity within a concrete substrate to receive a Siplast PMMA-based primer is 75%. Concrete having a higher moisture content (RH) may necessitate the use of an epoxy-based primer such as Siplast Pro Primer E.

New or existing concrete must be prepared to provide a sound substrate free from laitance and should be free from materials that may inhibit adhesion of the Parapro 123 Flashing System. Prepare using mechanical abrasion to a minimum CSP-2 to CSP-4. All spalls and voids must be repaired. Masonry walls should be prepared in the same manner as concrete substrates. Parapro materials must not be applied over soft or scaling brick or masonry, faulty mortar joints, or walls with broken, damaged, or a leaking coping system. Masonry wall surfaces above the termination of the Parapro materials should be appropriately treated against moisture intrusion, and a properly sealed, reglet-anchored counterflashing should be considered.

### **Metal & Rigid Plastic**

Lightly abrade and clean metal and rigid plastic substrates. Extend the preparation area a minimum of 1/4-inch (7 mm) beyond the termination of the Parapro materials.

### **Siplast Granule-Surfaced Membranes**

All loose granules, dust, and organic debris must be completely removed from the surface of the roof membrane by brooming, and/or power vacuuming, low-pressure wash, or other suitable method prior to application of the Parapro 123 Flashing System. If a low-pressure wash is used, allow the substrate to dry completely prior to application of Parapro or Pro Products.

### **Insulation/Substrate Panels**

Acceptable sheathings include approved cementitious boards, and DensDeck Prime as substrates for direct application of Parapro flashing materials. Common paper-faced gypsum wall board is not acceptable as a substrate panel. Joints between panels must be overlaid with 2-inch wide strips of gaffers tape. The gaffers tape should then be primed using Pro Primer W prior to application of the Parapro 123 Flashing System. Alternatively, the panels can be primed using Pro Primer W followed by application of 2-inch (50 mm) strips of Siplast Pro Tape over the joints. The Parapro 123 Flashing System applied to walls with approved insulation or substrate panels must be adequately counter flashed.

### **Plywood Sheathing Panels**

Plywood should be exterior grade, AC or better. Install panels with the "A" side to receive the primer. "A" surfaced plywood is used to eliminate the presence of knots and/or glues, both of which can affect primer cure. Pressure treated and fire-retardant plywood is typically not produced in an A-grade finish and is wet with chemical treatments in most cases. Any such panel should be tested by Siplast R&D before use to ensure that the chemicals will not affect the integrity or adhesion of the primer. Prior to application of the Parapro 123 Flashing System, overlay joints with gaffers tape and prime using Pro Primer W. Alternatively, panels can be primed using Pro Primer W, including the vertical surfaces at gaps between panels. Joints should then be filled with Pro Paste and reinforced using a 6-inch (150 mm) wide strip of Parapro Flashing Resin/Pro Fleece/Parapro Flashing Resin. Another option is to apply a 2-inch (50 mm) strip of Siplast Pro Tape over the joints between primed panels.

## **VI. Measuring and Mixing Parapro and Pro Resins**

### **General Guidelines**

Parapro and Pro Resins are fast setting and should only be catalyzed as needed. Depending on the resin type and ambient/substrate temperature, the amount of catalyst needed will vary.

### **Mixing All Parapro Resins**

Thoroughly mix the entire drum of uncatalyzed Parapro or Pro Resin for 2 minutes before each use

if pouring off into a second container when batch mixing. This will redistribute liquids and solids that may have separated during storage. Catalyze only the amount of resin that can be used within the approximate anticipated pot life. Add premeasured Pro Catalyst liquid or powder to the resin component and stir for 2 minutes using a slow-speed mechanical agitator or a mixing stick before applying to the substrate.

## Measuring Resins and Catalyst

### Liquid Measure of Resins

The amount of Pro Catalyst liquid or powder that should be used is based on the weight of (or associated volume) the uncatalyzed Parapro or Pro Resins. Resin products may have different volumes for the same measure of weight. See the table below for ratios.

Parapro and Pro Resins may be field measured using the following conversions:

Resin Type	Density	Liquid Measure
Pro Primer R Resin	1.0 kg/liter	1.0 liter/kg
Pro Primer T Resin	1.0 kg/liter	1.0 liter/kg
Pro Primer W Resin	1.0 kg/liter	1.0 liter/kg
Pro Paste Resin	1.4 kg/liter	0.72 liter/kg
Parapro Flashing Resin	1.4 kg/liter	0.72 liter/kg

### Batch Weighing

The most accurate means of field measuring Parapro and Pro Resins is with a portable, battery-operated scale.

### Measure of Pro Catalyst

Pro Catalyst Liquid is supplied in 10-cup containers and is measured using a culinary-type cup or a 1-tablespoon measuring spoon. A measuring cup and spoon are supplied with each container of Pro Catalyst Liquid.

Pro Catalyst Powder is supplied in a vented box containing ten pre-measured 0.1 kg (100 gram) bags for a total of 1 kilogram per box. A 1-tablespoon measuring spoon is included in each container of Pro Catalyst Powder.

### Pro Catalyst Mixing Ratios & Measurements

The amount of Pro Catalyst liquid or powder added to Parapro and Pro Resins is based on the weight (or associated volume) of the resin used, and varies with the type of resin and the ambient temperature. The amount of Pro Catalyst liquid or powder added to Parapro or Pro Resins should never be less than indicated in the mixing ratio tables. If resin mixed with the required catalyst does not offer sufficient pot life, the resin temperature may be too high.

## Pro Catalyst Liquid Mixing Charts

Pro Catalyst Liquid Mixing Chart Pro Primer R, Pro Primer W, and Pro Primer T						
Resin Quantity	Ambient Temperature 77°F to 95°F (25°C to 35°C)		Ambient Temperature 41°F to 77°F (5°C to 25°C)		Ambient Temperature 32°F to 41°F (0°C to 5°C)	
	tablespoons	cups	tablespoons	cups	tablespoons	cups
1 kg (1 liter)	2	n/a	4	n/a	6	n/a
10 kg (10 liters)	n/a	1	n/a	2	n/a	3
Substrate temperature range for application of Pro Primer W, T, and R Resins is 32°F to 95°F (0°C to 35°C).						



Pro Catalyst Liquid Mixing Chart Summer Grade Parapro Flashing Resin				
Resin Quantity	Ambient Temperature 68°F to 104°F (20°C to 40°C)		Ambient Temperature 59°F to 68°F (15°C to 20°C)	
	tablespoons	cups	tablespoons	cups
1 kg (0.72 liter)	2	n/a	4	n/a
10 kg (7.2 liters)	n/a	1	n/a	2
Substrate temperature range for application of Summer Grade Parapro Flashing Resin is 59°F to 122°F (15°C to 50°C).				

Pro Catalyst Liquid Mixing Chart Winter Grade Parapro Flashing Resin						
Resin Quantity	Ambient Temperature 59°F to 68°F (15°C to 20°C)		Ambient Temperature 41°F to 59°F (5°C to 15°C)		Ambient Temperature 23°F to 41°F (-5°C to 5°C)	
	tablespoons	cups	tablespoons	cups	tablespoons	cups
1 kg (0.72 liter)	2	n/a	4	n/a	6	n/a
10 kg (7.2 liters)	n/a	1	n/a	2	n/a	3
Substrate temperature range for application of Winter Grade Parapro Roof and Flashing Resin is 23°F to 77°F (-5°C to 25°C).						

Pro Catalyst Liquid Mixing Chart Pro Paste Resin						
Resin Quantity	Ambient Temperature 77°F to 95°F (25°C to 35°C)		Ambient Temperature 41°F to 77°F (5°C to 25°C)		Ambient Temperature 32°F to 41°F (0°C to 5°C)	
	tablespoons	cups	tablespoons	cups	tablespoons	cups
1 kg (0.72 liter)	2	n/a	4	n/a	6	n/a
Substrate temperature range for application of Pro Paste is 32°F to 122°F (0°C to 50°C)						

## Pro Catalyst Powder Mixing Charts

Pro Catalyst Powder Mixing Chart Pro Primer R Resin - Pro Primer W Resin - Pro Primer T Resin									
Resin Quantity	2% Catalyst 77°F to 95°F (25°C to 35°C)			4% Catalyst 41°F to 77°F (5°C to 25°C)			6% Catalyst 32°F to 41°F (0°C to 5°C)		
	g	Tblsp.	0.1-kg Bags	g	Tblsp.	0.1-kg Bags	g	Tblsp.	0.1-kg Bags
1 kg (1 liter)	20	2	n/a	40	4	n/a	60	6	n/a
10 kg (10 liters)	200	n/a	2	400	n/a	4	600	n/a	6
Substrate temperature range for application of Pro Primer W, T, and R Resins is 32°F to 95°F (0°C to 35°C).									

Pro Catalyst Powder Mixing Chart Parapro Flashing Resin - Summer Grade						
Resin Quantity	Summer Grade 2% Catalyst 68°F to 104°F (20°C to 40°C)			Summer Grade 4% Catalyst 59°F to 68°F (15°C to 20°C)		
	g	Tblsp.	0.1-kg Bags	g	Tblsp.	0.1-kg Bags
1 kg (0.72 liter)	20	2	n/a	40	4	n/a
10 kg (7.2 liters)	200	n/a	2	400	n/a	4
Substrate temperature range for application of Summer Grade Resin is 59°F to 122°F (15°C to 50°C).						

Pro Catalyst Powder Mixing Chart Parapro Flashing Resin - Winter Grade									
Resin Quantity	Winter Grade 2% Catalyst 59°F to 68°F (15°C to 20°C)			Winter Grade 4% Catalyst 41°F to 59°F (5°C to 15°C)			Winter Grade 6% Catalyst 23°F to 41°F (-5°C to 5°C)		
	g	Tblsp.	0.1-kg Bags	g	Tblsp.	0.1-kg Bags	g	Tblsp.	0.1-kg Bags
1 kg (0.72 liter)	20	2	n/a	40	4	n/a	60	6	n/a
10 kg (7.2 liters)	200	n/a	2	400	n/a	4	600	n/a	6
Substrate temperature range for application of Winter Grade Resin is 23°F to 77°F (-5°C to 25°C).									

## VII. Pro Primer W, Pro Primer T, and Pro Primer R Resins

### General Application Guidelines

Priming with catalyzed Pro Primer T Resin is required prior to application of Parapro 123 Flashing Systems where horizontal areas of concrete are to be treated. Pro Primer W is required for concrete in a vertical orientation, plywood, wood, DensDeck Prime, or approved cement boards. For specific priming requirements, refer to the substrate preparation chart on page 3 of this guide.

Priming with catalyzed Pro Primer R Resin is recommended prior to application of Parapro 123 Flashing Systems over asphaltic substrates where aesthetics are a concern. For specific priming requirements, refer to the substrate preparation chart on page 3 of this guide.

See the information below for ambient and substrate temperature limitations when applying Pro Primer T, Pro Primer W, and Pro Primer R.

Minimum ambient and substrate temperature:  
32°F (0°C)

Maximum ambient and substrate temperature:  
95°F (35°C)

The resin itself should be within storage temperature guidelines at the time of catalyzation to ensure that the product maintains a workable pot life. Discontinue primer application when the ambient and/or substrate temperature exceeds 95°F (35°C). In warm tempera-

tures, the substrate should be shaded for a sufficient period of time, as necessary, to maintain substrate temperatures below maximum values.

Pro Primer W, Pro Primer T, and Pro Primer R are applied with a roller and can be covered with Parapro Flashing Resin after the primer is cured (generally a minimum of 45 minutes following application). When priming concrete substrates Pro Primers should always be applied when ambient and substrate temperatures are falling rather than rising to minimize the potential for the formation of pinholes in the applied primer. Pro Primer W and Pro Primer T can be exposed for up to 6 months. If work is interrupted for more than 12 hours, or the surface of the primer becomes dirty or contaminated from exposure to the elements, thoroughly clean the in-place and cured primer with Pro Prep. Pro Prep should be allowed a minimum of 20 minutes drying time after application before continuing. Following the Pro Prep drying time, the next application process should be completed within 60 minutes.

### Pot Life of Pro Primer W, Pro Primer T, and Pro Primer R

The pot life of Pro Primer W, Pro Primer T, and Pro Primer R is approximately 15 minutes when the catalyzed liquid is at 68°F (20°C). Pot life will be reduced if the resin is at higher temperatures. Pot life can be maximized by storing product under controlled conditions and ensuring that the liquid resin is at the low

range of the minimum storage temperature during/ following catalyzation and prior to application.

**Pro Primer W, Pro Primer T,  
and Pro Primer R Set Times**

Minimum set/cure times noted below are approximate, and may vary. The information provided is based on laboratory conditions, and is intended for use as a guideline only. Actual set/cure times should be established in the field, based on actual field conditions.

**Rain Proof at 68°F (20°C): 25 minutes**  
**Ready for Next Coat at 68°F (20°C): 45 minutes**

**Application/Coverage Rates of Pro Primer W, Pro Primer T, and Pro Primer R**

See tables below.

Pro Primer W			
	Minimum coverage/consumption rate		
Substrate	kg/ft <sup>2</sup>	kg/sq	kg/m <sup>2</sup>
Wood, Plywood, Vertical Concrete, and other Substrates Listed on Page 3	0.037	3.7	0.4
DensDeck Prime & Approved Cement Boards	0.074	7.4	0.8

Pro Primer T			
	Minimum coverage/consumption rate		
Substrate	kg/ft <sup>2</sup>	kg/sq	kg/m <sup>2</sup>
Horizontal Concrete	0.037	3.7	0.4

Pro Primer R			
	Minimum coverage/consumption rate		
Substrate	kg/ft <sup>2</sup>	kg/sq	kg/m <sup>2</sup>
Smooth Asphaltic Substrates	0.037	3.7	0.4

## VIII. Pro Primer E Resin

### General Application Guidelines

Priming with Pro Primer E is recommended prior to application of the Parapro 123 Flashing System over approved concrete substrates where the moisture content is higher than that allowable for the use Pro Primer T or Pro Primer W or for odor sensitive projects. For specific priming requirements, refer to the substrate preparation chart on page 3 of this guide.

### Mixing Pro Primer E

Pro Primer E is supplied in kit form that requires mixing in full batch quantities. Pro Primer E should be a minimum of 60°F (15°C) at the time of mixing. Pierce a hole through the rubber membrane in the lid and continue through the bottom of the lid well. Ensure that Part B in the upper reservoir fully drains into the lower reservoir containing Part A – this may require several piercings. Stir mixture for 5 minutes using a Jiffy Mixer at low speed (approximately 300 rpm) to generate a homogeneous, streak-free consistency. Keep the mixer blades fully submerged during stirring to avoid trapping air. Pour the mixed material into a clean, secondary container and mix again for an additional 30 seconds. Ensure that the bottom and sides of the container are fully scraped to disperse any materials that may have settled.

### Application of Pro Primer E

See the information below for ambient and substrate temperature limitations when applying Pro Primer E.

**Minimum ambient and substrate temperature:**  
45°F (8°C)

**Maximum ambient and substrate temperature:**  
95°F (35°C)

In warm temperatures, the substrate should be shaded for a sufficient period of time, as necessary, to maintain substrate temperatures below 95°F (35°C). Pro Primer E should always be applied when ambient and substrate temperatures are falling rather than rising to minimize the potential for the formation of pinholes in the applied primer. Ensure that the primer system will be protected from direct sunlight, wind, precipitation/condensation, and bond-inhibiting

surface contaminants (dust, dirt and tear-off debris) during the curing process.

Prior to application of Pro Primer E, wet the qualified/prepared concrete substrate and ensure that it is in a saturated-surface-dry (SSD) condition. Saturated-surface-dry is a condition in which the substrate is wetted but no standing/ ponding water should be present. For flashing applications, Pro Primer E is applied with a brush or roller. Use a scrub brush to scrub the primer into the concrete surface. Follow the scrubbing process by using a non-shed roller to ensure that the Pro Primer E is distributed evenly and that there is a continuous layer of primer. Allow the primer to cure for 12 hours. Pro Primer E must be overlaid with Parapro Flashing Resin within 48 hours of primer application without exception. Thoroughly clean the Pro Primer E surface with warm water or Pro Prep prior to application of Parapro Flashing Resin. The water and/or Pro Prep should be allowed to fully dry before application of flashing materials

### Pot Life of Pro Primer E

The pot life Pro Primer E is approximately 30 minutes when the liquid is at 68°F (20°C).

### Minimum Application/Coverage Rates for Pro Primer E

**Pro Primer E Coverage/Consumption Rate —**  
0.046 kg/sf - 4.6 kg/sq - 0.5 kg/m<sup>2</sup>

**NOTE:** Application rates vary with substrate type, surface profile and porosity. In all cases, a continuous film of cured primer is required prior to application of subsequent layers of Parapro and Pro resins.

### Set/Cure Time for Pro Primer E

Typical cure time prior to application of Parapro or Pro Resins: 12 hours

Maximum exposure time prior to application of Parapro or Pro Resins: 48 hours

## IX. Pro Paste Resin

### Pro Paste

Pro Paste Resin is used for remediation of depressions in substrate surfaces or other irregularities prior to application of the Parapro Flashing System.

### Pro Paste Application Guidelines

See the information below for ambient and substrate temperature limitations when applying Pro Paste.

Minimum ambient and substrate temperature:  
32°F (0°C)

Maximum ambient temperature:  
95°F (35°C)

Maximum substrate temperature:  
122°F (50°C)

The resin itself should be within storage temperature guidelines at the time of catalyzation to ensure that the product maintains a workable pot life. Discontinue product application when the ambient temperature exceeds 95°F (35°C) and/or the substrate temperature exceeds the 122°F (50°C) maximum. Provide adequate shade over the substrate area both prior to and during application as necessary to maintain surface temperatures below maximum values.

Pro Paste Resin, as with all Parapro and Pro resin products, may require the application of a Pro Primer product before application. See the table on page 3 for specific substrate preparation guidelines.

When Pro Paste is to be applied over a Pro or Parapro product, thoroughly clean the surface of the in-place resin product with Pro Prep. This step is required even if the Pro or Parapro product has been recently applied. Pro Prep should be allowed a minimum of 20 minutes of drying time after application before continuing. Following the Pro Prep drying time, the Pro Paste application process should be completed within 1 hour.

Pro Paste is catalyzed using Pro Catalyst Liquid only.  
Do not utilize Pro Catalyst Powder in conjunction with Pro Paste. Pro Paste is applied with a trowel and can be covered with the Parapro 123 Flashing System after the Pro Paste is set.

### **Pro Paste Coverage Rates**

Pro Paste Thickness and Coverage Rates:

Typical Coverage: 0.13 kg/sf per 1 mm of thickness  
(1.4 kg/m<sup>2</sup> per 1 mm layer of thickness)

Minimum Thickness: product can be feather-edged

Maximum Thickness (per lift): 3/16 inch (5 mm)

### **Pro Paste Pot Life**

The pot life of Pro Paste is approximately 15 minutes when the catalyzed liquid or liquid/aggregate mixture is at 68°F (20°C). Pot life will be reduced if the resin is at higher temperatures. Pot life can be maximized by storing product under controlled conditions and ensuring that the liquid resin is at the low range of minimum storage temperature during/following catalyzation and prior to application.

### **Pro Paste Set/Cure Times**

Minimum set times noted below are approximate and may vary. The information provided is based on laboratory conditions and is intended for use as a guideline only. Actual set/cure times should be established in the field, based upon actual field conditions.

**Rain Proof at 68°F (20°C):** 30 minutes

**Ready for Next Coat at 68°F (20°C):** 1 hour

**Ready for Next Coat at 68°F (20°C):** 45 minutes

**Stress Resistant at 68°F (20°C):** 1 hour

## **X. Pro Fleece**

### **Pro Fleece**

Pro Fleece is the reinforcement layer used in Parapro 123 Flashing Systems.

### **Pro Fleece Sizes**

Pro Fleece is available in three widths: 41-inch (1050 mm), 25-inch (630 mm), and 12-inch (315 mm)

## **XI. Parapro Flashing Resin**

### **Parapro Flashing Resin - General Application Guidelines**

Parapro Flashing Resin, when catalyzed, is combined with fleece fabric to form the Parapro 123 Flashing System, a monolithic, reinforced flashing membrane used for flashing details. Parapro Flashing Resin is available in two formulations: Summer Grade and Winter Grade.

Care should be taken to ensure that the correct formulation of Parapro Flashing Resin (Summer Grade or Winter Grade) is chosen for the application based upon the ambient temperature during application. See the information that follows for ambient and substrate temperature limitations when applying Parapro Flashing Resin (Summer Grade or Winter Grade).

### **Summer Grade Parapro Flashing Resin**

**Minimum ambient and substrate temperature:**

59°F (15°C)

Maximum ambient temperature: 104°F (40°C)

Maximum substrate temperature: 122°F (50°C)

### **Winter Grade Parapro Flashing Resin**

**Minimum ambient and substrate temperature:**

23°F (-5°C)

Maximum ambient temperature: 68°F (20°C)

Maximum substrate temperature: 77°F (25°C)

The resin itself should be within storage temperature guidelines at the time of catalyzation to ensure that the product maintains a workable pot life. Discontinue



resin application when ambient or substrate temperature exceeds the values above. In warm temperatures, the substrate should be shaded for a sufficient period of time both prior to and during application, as necessary, to maintain substrate temperatures below maximum values.

All Parapro 123 Flashing System applications installed in conjunction with a Parapro Roof System should be completed prior to field membrane application. An even, generous base coat of catalyzed Parapro Flashing Resin is applied to the substrate with a roller or brush. Pro Fleece reinforcement is worked into the wet, catalyzed Parapro Flashing Resin base coat using a roller or brush to fully embed the fleece in the resin and remove trapped air. Pro Fleece must be overlapped a minimum of 2 inches (50 mm). An additional coat of catalyzed Parapro Flashing Resin must be placed between all layers of overlapping fleece. Catalyzed Parapro Flashing Resin must extend a maximum 1/4-inch beyond the Pro Fleece reinforcement. An even, generous top coat of catalyzed Parapro Flashing Resin is applied immediately following embedment of the fleece to ensure full saturation of the fleece reinforcement.

If work is interrupted for more than 12 hours, or the surface of the catalyzed Parapro Flashing Resin becomes dirty or contaminated from exposure to the elements, thoroughly clean the transition area with Pro Prep. Pro Prep should be allowed a minimum of 20 minutes evaporation time after application before continuing work. Following the drying time, the next application process should be completed within 1 hour.

#### Parapro Flashing Resin Coverage Rates

See Tables Below.

#### Coverage and Overlap Requirements

- Maintain a minimum 2-inch (50 mm) fleece overlap at all laps.
- A minimum 4-inch (100 mm) overlap onto the surface of the base ply is required in interply Parapro 123 Flashing applications.
- A minimum 8-inch (200 mm) overlap onto the surface of the finish ply is required when the Parapro 123 Flashing System is applied over an approved finished roof membrane.
- The Parapro 123 Flashing System should terminate a minimum of 6 inches (150 mm) above the horizontal when applied on vertical applications.
- Catalyzed Parapro Flashing Resin should extend a maximum 1/4-inch beyond the Pro Fleece reinforcement.

#### Parapro Flashing Resin Pot Life

The pot life of Parapro Flashing Resin is approximately 15 minutes when the catalyzed liquid is at 68°F (20°C). Pot life will be reduced if the resin is at higher temperatures. Pot life can be maximized by storing product under controlled conditions and ensuring that the liquid resin is at the low range of minimum storage temperature during/following catalyzation and prior to application.

#### Parapro Flashing Resin Set Times

Minimum set/cure times noted below are approximate, and may vary. The information provided is based on laboratory conditions, and is intended for use as a guideline only. Actual set/cure times should be established in the field, based on actual field conditions.

**Rain Proof at 68°F (20°C):** 30 minutes

**Ready for Next Coat at 68°F (20°C):** 45 minutes

**Ready for Foot Traffic at 68°F (20°C):** approximately 2 hours

Parapro Flashing Resin Coverage Rates - Smooth Surfaces		
	Minimum coverage/consumption rate	
	kg/ft <sup>2</sup>	kg/m <sup>2</sup>
Total	0.31	3.3
Base Coat	0.19	2
Top Coat	0.12	1.3

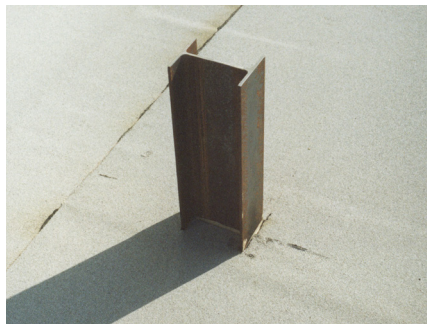
Parapro Flashing Resin Coverage Rates - Granule Surfaces		
	Minimum coverage/consumption rate	
	kg/ft <sup>2</sup>	kg/m <sup>2</sup>
Total	0.4	4.3
Base Coat	0.28	3
Top Coat	0.12	1.3

## XII. Coverage and Consumption Rates

Layer	Minimum Consumption			
	sf/unit*	kg/sf	kg/sq	kg/m²
Pro Primer T (concrete)	270 sf (10-kg pail)	0.037	3.7	0.4
Pro Primer R (smooth substrates)	270 sf (10-kg pail)	0.037	3.7	0.4
Pro Primer W (plywood and concrete)	270 sf (10-kg pail)	0.037	3.7	0.4
Pro Primer W (DensDeck Prime/Cement Boards)	135 sf (10-kg pail)	0.074	7.4	0.8
Parapro Flashing Base Layer (smooth surfaces)	32 sf (10-kg pail)	0.19	18.6	2
Reinforcing Fleece - Pro Fleece				
Parapro Flashing Top Layer		0.12	12.1	1.3
Parapro Flashing Base Layer (granule surfaces)	25 sf (10-kg pail)	0.28	27.9	3
Reinforcing Fleece - Pro Fleece				
Parapro Flashing Top Layer		0.12	12.1	1.3
* Does not include waste, overage due to uneven/rough substrates, product needed to treat joints/cracks/overlaps and material required to saturate roller covers.				

### XIII. Parapro 123 Flashing System Application

Flashing a Penetration: Applications over the finish ply of a Siplast SBS-modified bitumen roof.



1. Ensure that the finish ply of the roof system fits tightly around the penetration. Fill voids where membranes terminate at penetrations with Pro Paste.



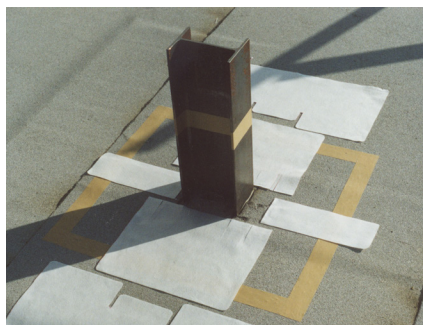
2. Remove all foreign materials from the penetration, such as dirt, rust, asphalt, coatings, paint, or other substances, by grinding. Refer to the substrate preparation chart on page 3 for more information.



3. Using Pro Prep and a clean shop rag, wipe the area of the penetration to be flashed. Allow the Pro Prep a minimum of 20 minutes drying time after application before continuing.



4. Using tape, mask off the termination of the flashing 6 inches high on the penetration, and extending 8 inches onto the finished roof membrane in all directions. Catalyzed Parapro Flashing Resin must not extend more than 1/4-inch beyond the Pro Fleece reinforcement, so tape should be placed accordingly.



5. Cut the Pro Fleece reinforcement for the penetration configuration. Place each piece dry in its designated area to ensure proper fit and laps prior to catalyzation of the Parapro Flashing Resin.



6. Mix the Pro Catalyst and Parapro Flashing Resin as detailed in the mixing instructions.



7. Apply a base coat of catalyzed Parapro Flashing Resin to the vertical penetration surfaces, extending onto the roof membrane a minimum of 2 inches.

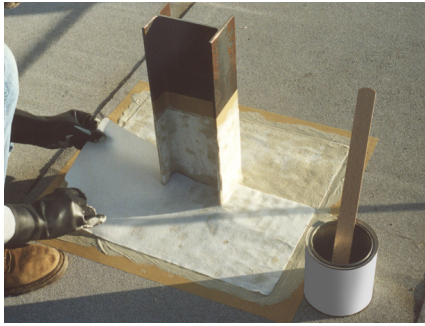


8. Apply the pre-cut Pro Fleece to the vertical penetration surfaces by embedding the fleece in the resin, extending the fleece a minimum of 2 inches onto the roof membrane. Ensure that the resin extends a maximum of 1/4-inch beyond the edge of the fleece, and that no air is trapped beneath the fleece.



9. Saturate all fleece surfaces to be lapped with catalyzed Parapro Flashing Resin. Strips of fleece must overlap by at least 2 inches (50 mm).

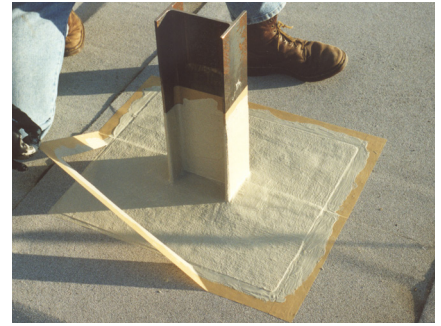




10. Apply a base coat of catalyzed Parapro Flashing Resin to the horizontal surface extending a minimum of 8 inches from the penetration in all directions. Apply the pre-cut Pro Fleece to the horizontal surface by embedding the fleece in the resin, extending the fleece a minimum of 8 inches onto the horizontal surface. Ensure that the resin extends a maximum of 1/4-inch beyond the edge of the fleece, and that no air is trapped beneath the fleece.



11. Top coat the embedded Parapro Fleece with an additional layer of catalyzed Parapro Flashing Resin.



12. Remove the masking tape before the resin sets completely.

**Flashing an Angle Iron with Bolted Footplate:  
Application over the finish ply of a Siplast SBS-modified bitumen roof.**



1. Remove all foreign materials from the penetration, such as dirt, rust, asphalt, coatings, paint, or other substances by grinding. Refer to the substrate preparation chart on page 3 for more information.



2. Using Pro Prep and a clean shop rag, wipe the area of the angle iron to be flashed. Allow the Pro Prep a minimum of 20 minutes drying time after application before continuing.



3. Apply catalyzed Pro Paste over the protruding bolts to create a smooth surface for the reinforced Parapro flashing membrane. Allow the Pro Paste a minimum of 60 minutes curing time before continuing.



4. Using tape, mask off the termination of the flashing 6 inches high on the projection, and extending 8 inches from the base footplate in all directions. Catalyzed Parapro Flashing Resin must extend a maximum 1/4-inch beyond the Pro Fleece reinforcement, place tape accordingly. Cut the Pro Fleece reinforcement for the penetration configuration. Place each piece dry in its designated area to ensure proper fit and laps prior to catalyzation of the Parapro Flashing Resin.



5. Mix the Pro Catalyst and Parapro Flashing Resin as detailed in the mixing instructions. Apply a base coat of catalyzed Parapro Flashing Resin to the vertical projection extending onto the horizontal surface a minimum of 2 inches. Apply the pre-cut Pro Fleece to the vertical projection surfaces by embedding the fleece in the resin, extending the fleece a minimum of 2 inches onto the horizontal surface. Ensure that the resin extends a maximum of 1/4-inch beyond the edge of the fleece, and that no air is trapped beneath the fleece.



6. Saturate all fleece surfaces to be lapped with catalyzed Parapro Membrane Resin prior to overlapping with additional fleece. Strips of fleece must overlap by at least 2 inches. Apply a base coat of catalyzed Parapro Flashing Resin to the horizontal surface as above extending a minimum of 8 inches from the edge of the footplate in all directions. Apply the pre-cut Pro Fleece to the horizontal surface by embedding the fleece in the resin, extending the fleece a minimum of 8 inches onto the horizontal surface. Ensure that the resin extends a maximum 1/4-inch beyond the edge of the fleece, and that no air is trapped beneath the fleece.



7. Top coat the embedded Pro Fleece with an additional layer of catalyzed Parapro Flashing Resin.



8. Remove the masking tape before the resin sets completely.

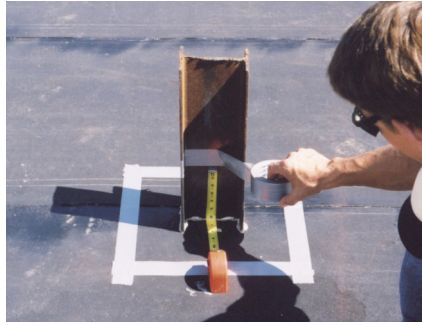


## XIV. Parapro 123 Flashing System Interply Application

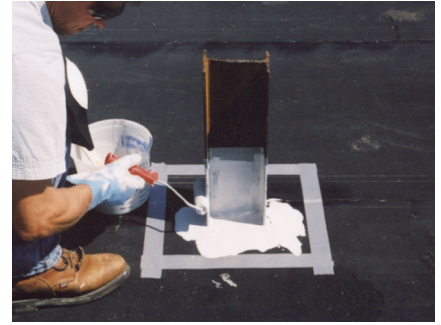
Flashing a Penetration: Applications over the base ply of a Siplast SBS-modified bitumen roof.



1. Ensure that the base ply of the roof system fits tightly around the penetration. Fill any voids where membranes terminate at penetrations with Pro Paste. Remove all foreign materials from the penetration, such as dirt, rust, asphalt, coatings, paint, or other substances by grinding. Refer to the substrate preparation chart on page 3 for more information. Using Pro Prep and a clean shop rag, wipe the area of the penetration to be flashed. Allow the Pro Prep a minimum of 20 minutes drying time after application before continuing.



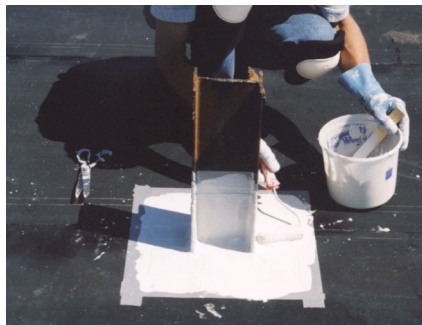
2. Using tape, mask off the termination of the flashing 6 inches high on the penetration, and extending 4 inches onto the base ply in all directions. Catalyzed Parapro Flashing Resin must extend a maximum 1/4-inch beyond the Pro Fleece reinforcement, so tape should be placed accordingly.



3. Cut the Pro Fleece reinforcement for the penetration configuration. Place each piece dry in its designated area to ensure proper fit and laps prior to catalyzation of the Parapro Flashing Resin. Mix the Pro Catalyst and Parapro Flashing Resin as detailed in the mixing instructions. Apply a base coat of catalyzed Parapro Flashing Resin to the vertical penetration surfaces extending onto the base ply a minimum of 2 inches.



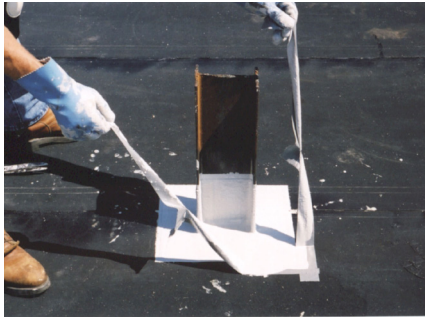
4. Apply the pre-cut Pro Fleece to the vertical penetration surfaces by embedding the fleece in the resin, extending the fleece a minimum of 2 inches onto the roof membrane. Ensure that no air is trapped beneath the fleece.



5. Saturate all fleece surfaces to be lapped with catalyzed Parapro Flashing Resin prior to overlapping with additional fleece. Strips of fleece must overlap by at least 2 inches (5 cm). Apply a base coat of catalyzed Parapro Flashing Resin to the horizontal surface extending a minimum of 4 inches from the penetration in all directions. Apply the pre-cut Pro Fleece to the horizontal surface by embedding the fleece in the resin, extending the fleece a minimum of 4 inches onto the horizontal surface. Ensure that the resin extends a maximum 1/4-inch beyond the edge of the fleece, and that no air is trapped beneath the fleece.



6. Top coat the embedded Pro Fleece with an additional layer of catalyzed Parapro Flashing Resin.



7. Remove the masking tape before the resin sets completely.



8. After the resin is set, a target of base ply material is applied over the finished Parapro Flashing Membrane if the underlying sheet was applied in solvent-based adhesive. Extend the target a minimum of 4 inches beyond the Parapro Flashing Membrane in all directions.



9. Apply the finish ply of the roof system, ensuring that the finish ply fits tightly around the penetration.



10. Apply a bead of PS-209 Elastomeric Sealant around the base of the penetration to fill any gaps between the SBS roof membrane system and the penetration.

## Appendix A

### Standard Parapro 123 Flashing System Details

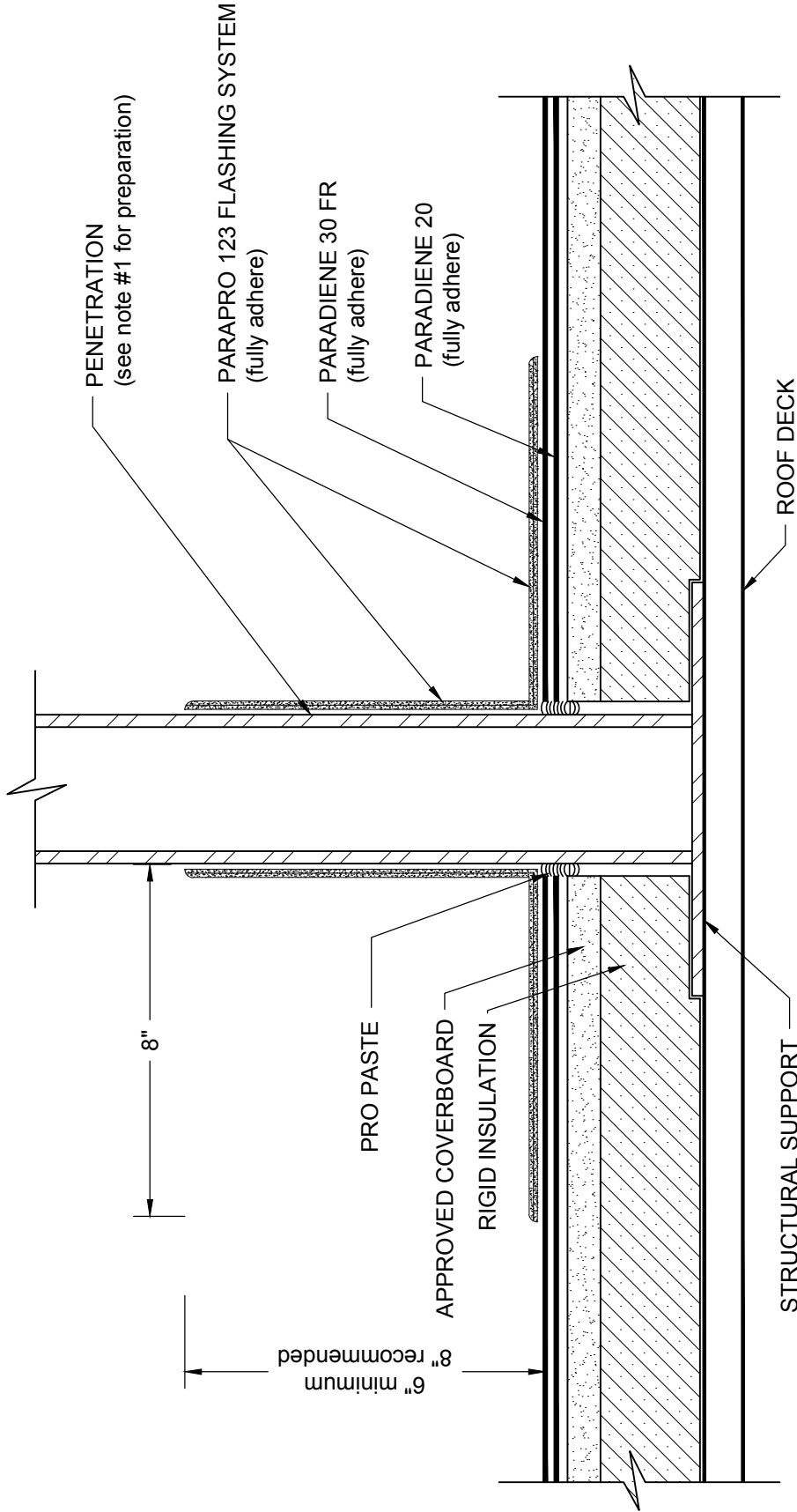
Typical Penetration Detail

Typical Angled Penetration Detail

Typical Penetration Detail (interply)

Typical Drain Detail

# PENETRATION with PARAPRO FLASHING PARADIENE 20/30 FR - RIGID INSULATION



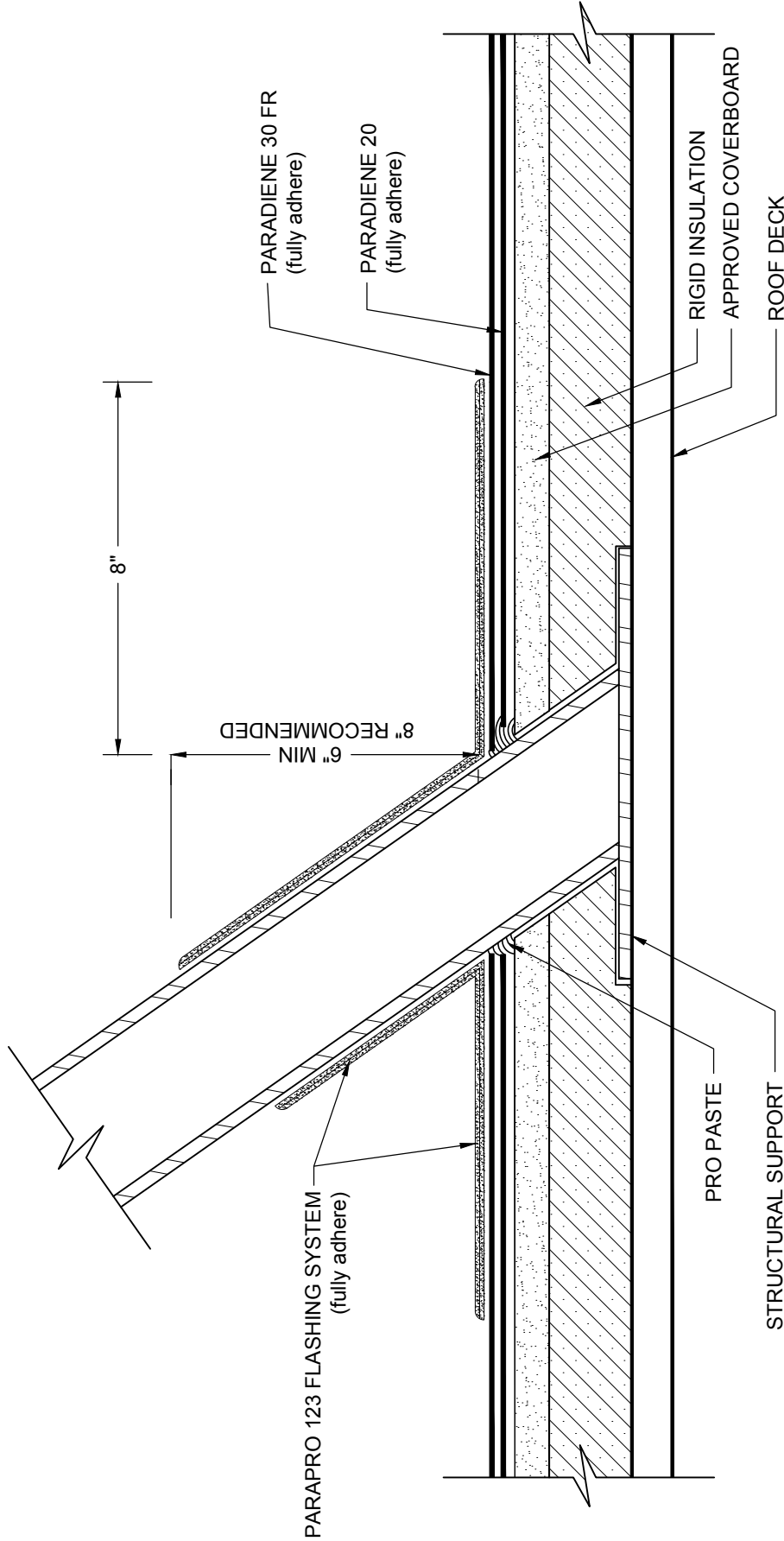
## NOTES:

1. REFER TO SIPLAST PREPARATION GUIDELINES FOR PROPER SURFACE TREATMENT OF ALL MATERIALS PRIOR TO APPLICATION OF PARAPRO MATERIALS.
2. BEFORE APPLICATION OF PARAPRO FLASHING MEMBRANE, PRO PASTE SHOULD BE USED TO FILL VOIDS WHERE ROOFING MEMBRANES TERMINATE AT PENETRATIONS.
3. PARAPRO CANNOT BE APPLIED IN THE ABOVE CONFIGURATION OVER MEMBRANES OR OTHER MATERIALS CONTAINING UNCURED, SOLVENT-BASED MATERIALS. IN SUCH CASES, MEMBRANES TO BE COVERED WITH PARAPRO MUST BE ADHERED WITH SFT ADHESIVE, SFT CEMENT, PS-209, OR PS-715 NS ELASTOMERIC SEALANT. CONTACT SIPLAST FOR ALTERNATIVE DETAILS THAT ALLOW FOR APPLICATION OVER A BASE PLY APPLIED IN SOLVENT BASED ADHESIVE.
4. REFER TO SIPLAST FLEECE CUTTING RECOMMENDATIONS FOR CONFIGURATIONS, CUTTING, FOLDING, AND LAPPING TECHNIQUES.
5. REQUIREMENTS AND RECOMMENDATIONS DETAILED IN CURRENT SIPLAST SPECIFICATIONS AND THE PARAPRO 123 FLASHING INSTALLERS GUIDE SHALL APPLY IN ADDITION TO THE ABOVE DRAWING.

CAUTION: SIPLAST RECOMMENDS THAT ALL PRACTICES PERTAINING TO NRCA CERTA GUIDELINES BE FOLLOWED WHEN TORCHING METHODS ARE EMPLOYED. THIS INCLUDES PERFORMING A FIRE WATCH FOLLOWING ANY TORCH APPLICATIONS. ALWAYS HAVE APPROVED FIRE-EXTINGUISHING EQUIPMENT NEARBY.

N.T.S

# ANGLED PENETRATION with PARAPRO FLASHING PARADIENE 20/30 FR - RIGID INSULATION



## NOTES:

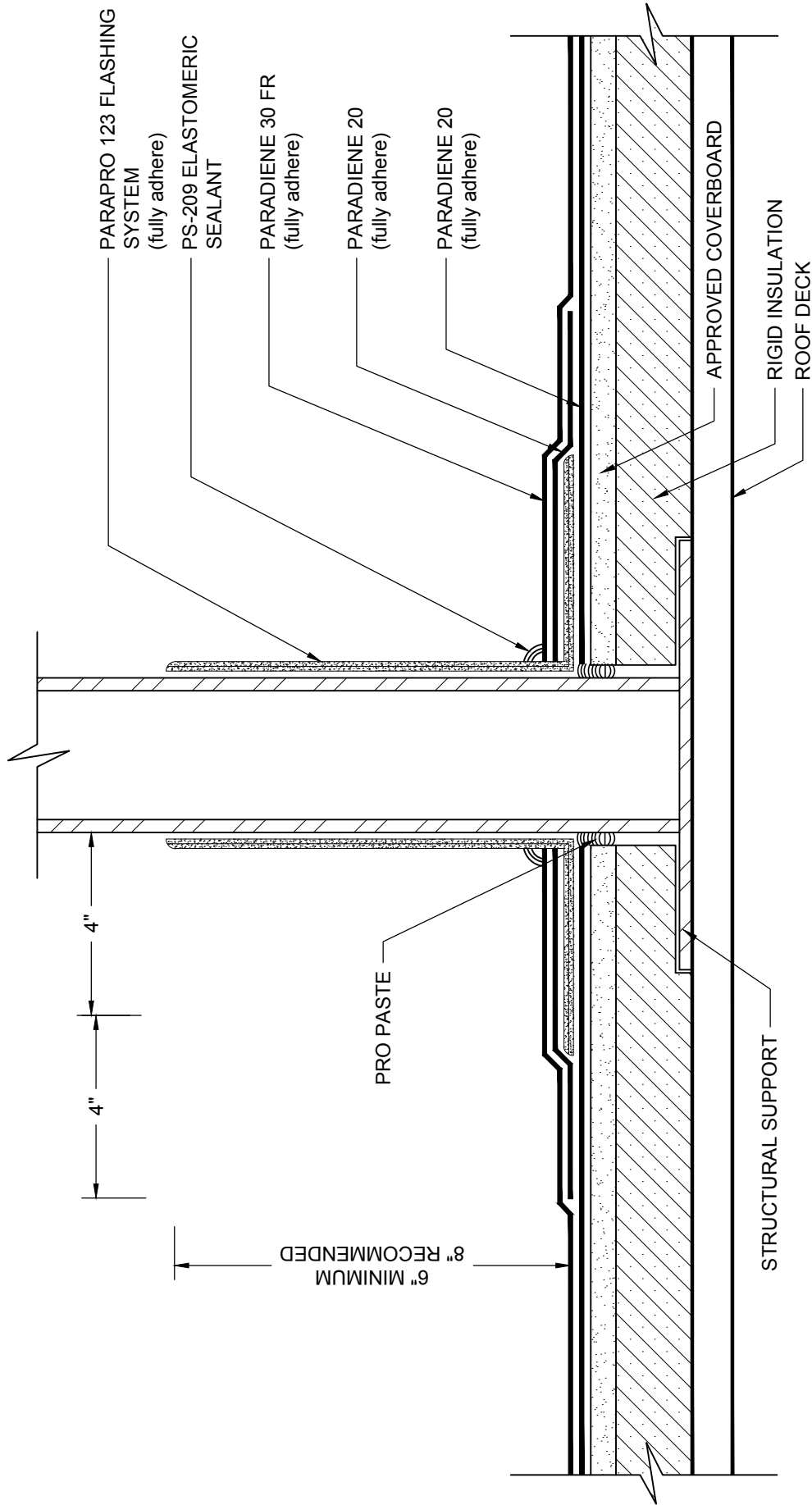
1. BEFORE APPLICATION OF THE PARAPRO FLASHING MEMBRANE, PRO PASTE SHOULD BE USED TO FILL VOIDS WHERE ROOFING MEMBRANES TERMINATE AT PENETRATIONS.
2. REFER TO SIPLAST PREPARATION GUIDELINES FOR PROPER SURFACE TREATMENT OF ALL MATERIALS PRIOR TO APPLICATION OF PARAPRO FLASHING MATERIALS.
3. PARAPRO CANNOT BE APPLIED IN THE ABOVE CONFIGURATION OVER MEMBRANES OR OTHER MATERIALS CONTAINING UNCURD, SOLVENT-BASED MATERIALS. IN SUCH CASES, MEMBRANES TO BE COVERED WITH PARAPRO MUST BE ADHERED WITH SFT ADHESIVE, SFT CEMENT, PS-209, OR PS-715 NS ELASTOMERIC SEALANT. CONTACT SIPLAST FOR ALTERNATIVE DETAILS THAT ALLOW FOR APPLICATION OVER A BASE PLY APPLIED IN SOLVENT BASED ADHESIVE.
4. REFER TO SIPLAST FLEECE CUTTING RECOMMENDATIONS FOR CONFIGURATIONS, CUTTING, FOLDING, AND LAPPING TECHNIQUES.
5. REQUIREMENTS AND RECOMMENDATIONS DETAILED IN CURRENT SIPLAST SPECIFICATIONS AND THE PARAPRO 123 FLASHING SYSTEM INSTALLER'S GUIDE SHALL APPLY IN ADDITION TO THE ABOVE DRAWING.

CAUTION: SIPLAST RECOMMENDS THAT ALL PRACTICES PERTAINING TO NRCA CERTA GUIDELINES BE FOLLOWED WHEN TORCHING METHODS ARE EMPLOYED. THIS INCLUDES PERFORMING A FIRE WATCH FOLLOWING ANY TORCH APPLICATIONS. ALWAYS HAVE APPROVED FIRE-EXTINGUISHING EQUIPMENT NEARBY.

N.T.S



# PENETRATION FOR ADHESIVE-APPLIED ROOF MEMBRANE with PARAPRO FLASHING PARADIENE 20/30 FR - RIGID INSULATION



## NOTES:

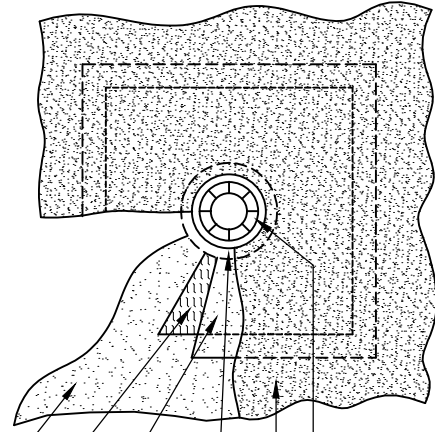
1. BEFORE APPLICATION OF PARAPRO 123 FLASHING SYSTEM, PRO PASTE SHOULD BE USED TO FILL VOIDS WHERE ROOFING MEMBRANES TERMINATE AT PENETRATIONS.
2. CLEAN/WIPE THE SURFACE OF THE CURED PARAPRO 123 FLASHING WITH PRO PREP AND ALLOW TO DRY PRIOR TO APPLICATION OF THE PARADIENE 20 STRIPPING PLY.
3. REFER TO SIPLAST PREPARATION GUIDELINES FOR PROPER SURFACE TREATMENT OF ALL MATERIALS PRIOR TO APPLICATION OF PARAPRO FLASHING MATERIALS.
4. REFER TO SIPLAST FLEECE CUTTING RECOMMENDATIONS FOR CONFIGURATIONS, CUTTING, FOLDING AND LAPPING TECHNIQUES.
5. REQUIREMENTS AND RECOMMENDATIONS DETAILED IN CURRENT SIPLAST SPECIFICATIONS AND THE PARAPRO 123 FLASHING SYSTEM INSTALLER'S GUIDE SHALL APPLY IN ADDITION TO THE ABOVE DRAWING.

N.T.S



# DRAIN with INTER-PLY PARAPRO FLASHING PARADIENE 20/30 FR - RIGID INSULATION

OVERHEAD VIEW



PARADIENE 20 (fully adhere)

PARAPRO 123 FLASHING SYSTEM (extend a minimum 8" beyond outermost edge of drain)

PARADIENE 20 (fully adhere, lap a minimum of 4" beyond Parapro Flashing)

MASTIC (set all roof layers above Parapro Flashing in mastic 6" around drain perimeter)

PARADIENE 30 FR

STRAINER & CLAMPING RING

CLAMPING RING

PARADIENE 30 FR (fully adhere)

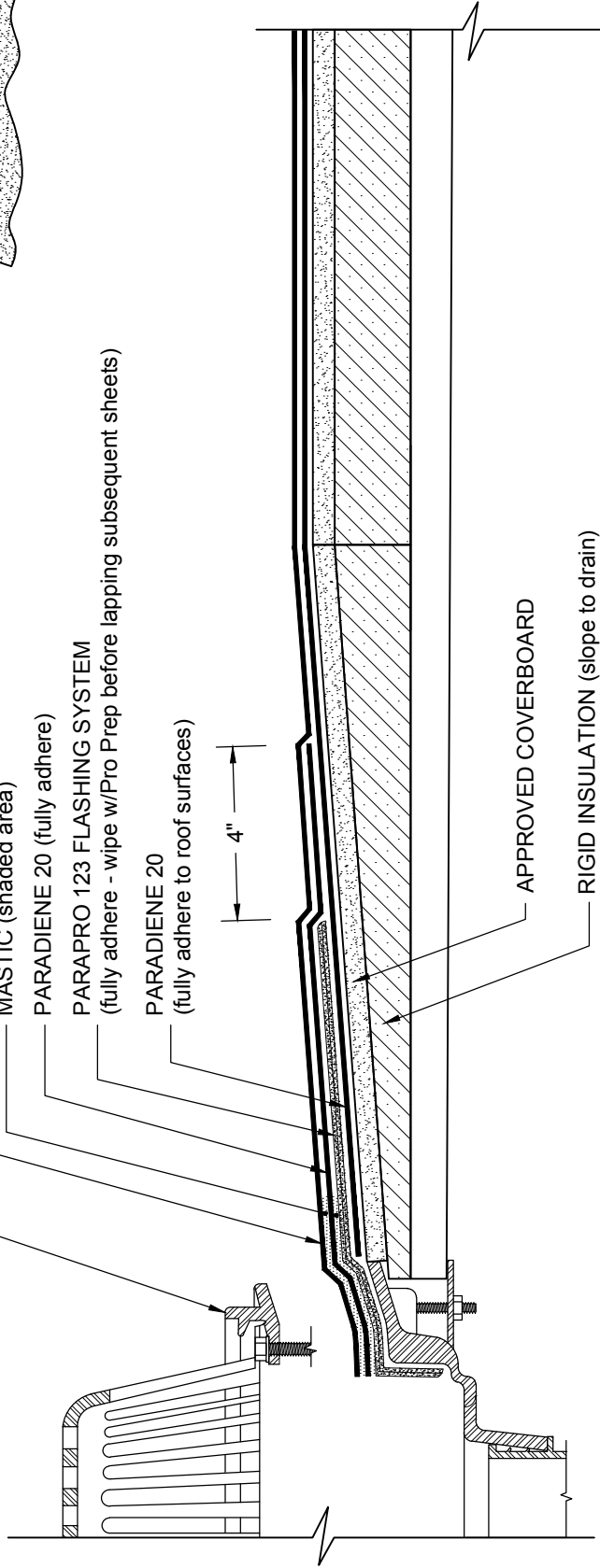
MASTIC (shaded area)

PARADIENE 20 (fully adhere)

PARAPRO 123 FLASHING SYSTEM (fully adhere - wipe w/Pro Prep before lapping subsequent sheets)

PARADIENE 20 (fully adhere to roof surfaces)

4"



APPROVED COVERBOARD

RIGID INSULATION (slope to drain)

## NOTES:

1. PA-1021 PLASTIC CEMENT, PA-828 FLASHING CEMENT, SFT CEMENT, OR PS-715 NS ELASTOMERIC SEALANT IS REQUIRED WHERE MASTIC IS INDICATED.
2. CLEANWIPe THE SURFACE OF THE CURED PARAPRO 123 FLASHING WITH PRO PREP AND ALLOW TO DRY PRIOR TO APPLICATION OF THE PARADIENE 20 STRIPPING PLY.
3. ROOF DRAIN COMPONENTS AND INSTALLATION GUIDELINES ARE SUPPLIED BY THE DRAIN MANUFACTURER.
4. REFER TO SIPLAST PREPARATION GUIDELINES FOR PROPER SURFACE TREATMENT OF ALL MATERIALS PRIOR TO APPLICATION OF PARAPRO FLASHING MATERIALS.
5. REFER TO SIPLAST FLEECE CUTTING RECOMMENDATIONS FOR CONFIGURATIONS, CUTTING, FOLDING, AND LAPPING TECHNIQUES.
6. REQUIREMENTS AND RECOMMENDATIONS DETAILED IN CURRENT SIPLAST SPECIFICATIONS AND THE PARAPRO 123 FLASHING SYSTEM INSTALLER'S GUIDE SHALL APPLY IN ADDITION TO THE ABOVE DRAWING.

CAUTION: SIPLAST RECOMMENDS THAT ALL PRACTICES PERTAINING TO NRCA CERTA GUIDELINES BE FOLLOWED WHEN TORCHING METHODS ARE EMPLOYED. THIS INCLUDES PERFORMING A FIRE WATCH FOLLOWING ANY TORCH APPLICATIONS. ALWAYS HAVE APPROVED FIRE-EXTINGUISHING EQUIPMENT NEARBY.

N.T.S

## **Appendix B**

### **Parapro 123 Flashing System Fleece Cutting Diagrams**

Typical Angle Iron Detail 1:  
Vertical Surfaces

Typical Angle Iron Detail 2:  
Horizontal Surfaces

Typical Angle Iron Detail 3:  
Horizontal Surfaces (Interply)

Typical I-Beam Detail 1:  
Vertical Surfaces

Typical I-Beam Detail 2:  
Horizontal Surfaces

Typical Round Pipe Detail

Typical Round Pipe Detail (Interply)

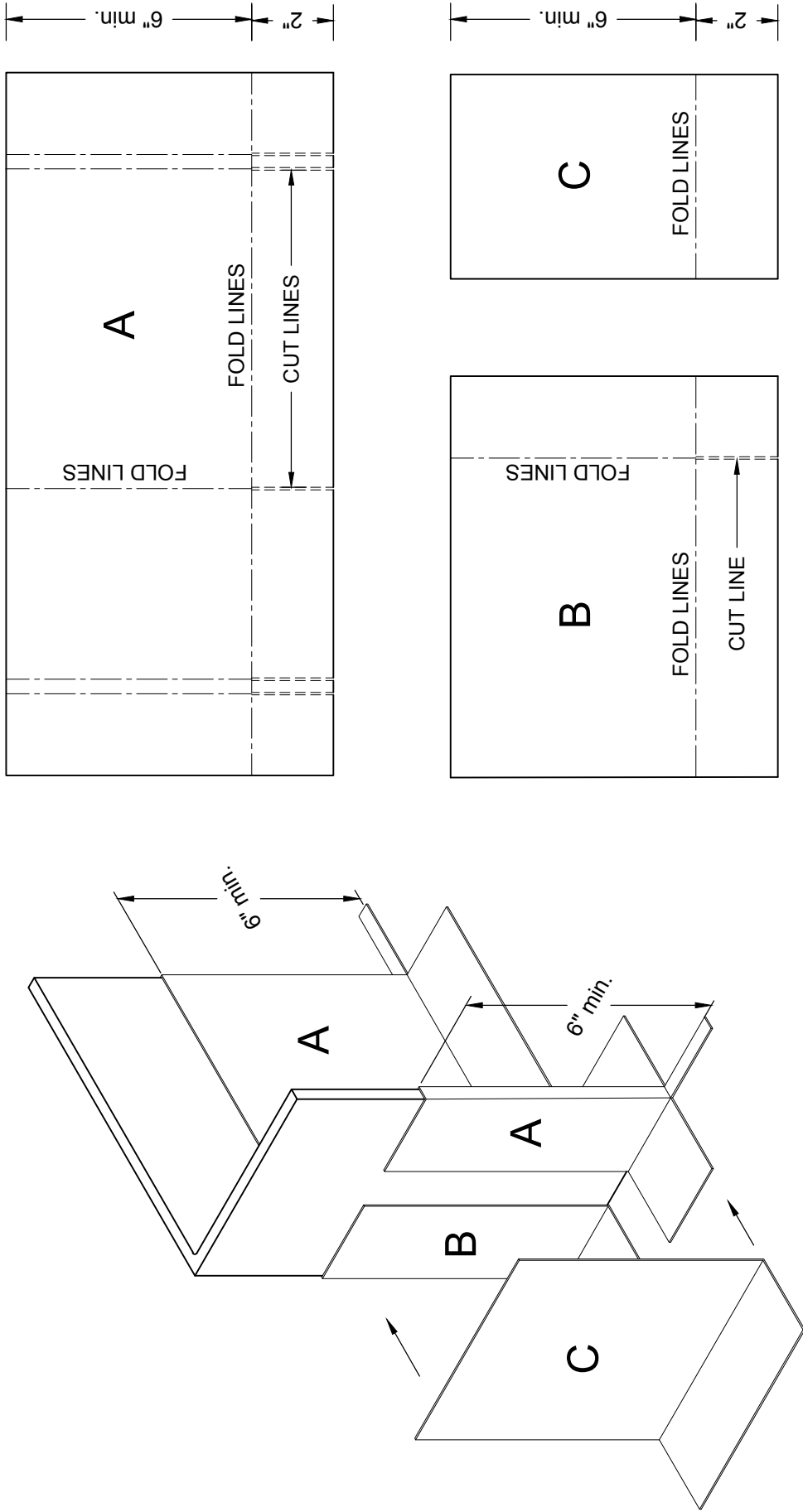
Outside Corner Detail (bottom)

Inside Corner Detail

# PARAPRO 123 FLASHING SYSTEM AND PARAFLEX 531 LIQUID FLASHING MEMBRANE

Fleece cutting recommendations

Typical angle iron detail 1: vertical surfaces



## NOTES:

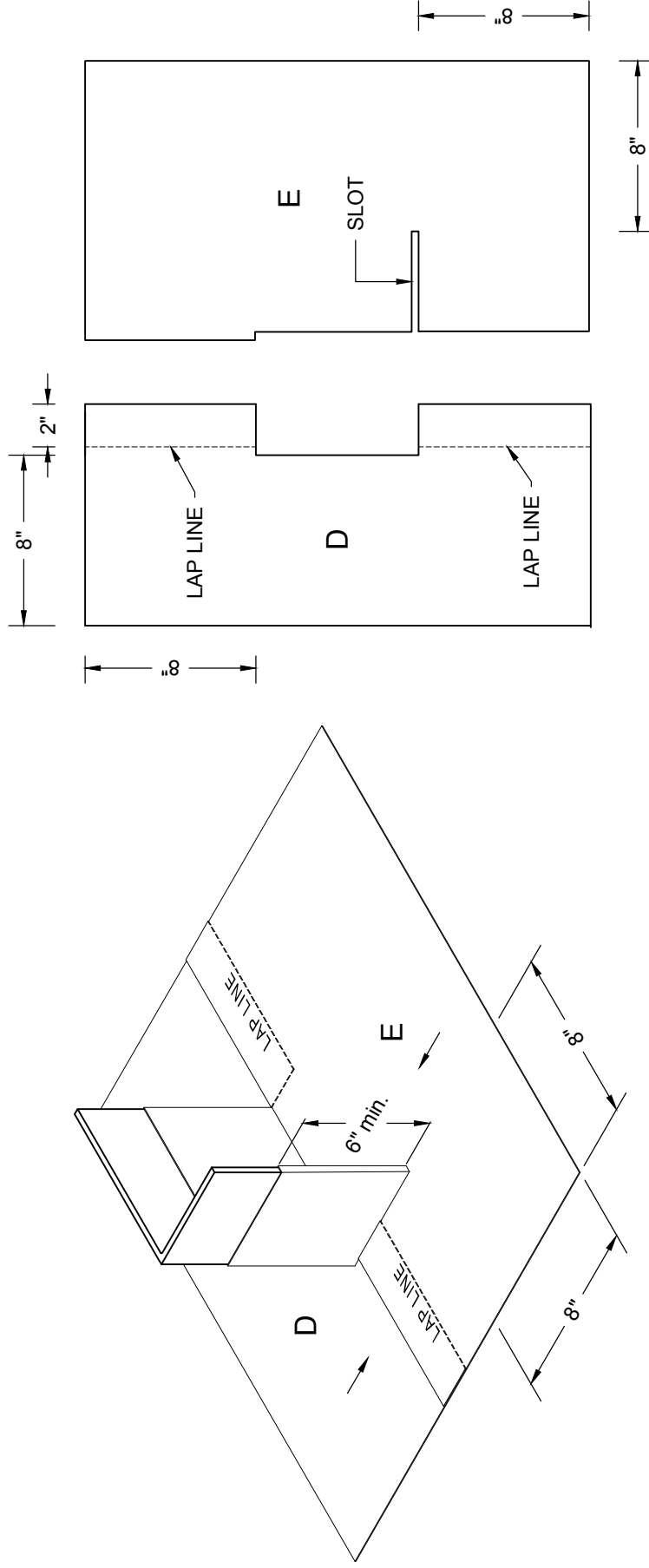
1. SEE SCHEMATICS "FC angle S-2" and "FC angle S-3" FOR FLEECE CUTTING TREATMENT OF HORIZONTAL SURFACES.
2. REFER TO SIPLAST PREPARATION GUIDELINES FOR PROPER SURFACE TREATMENT OF ALL MATERIALS PRIOR TO APPLICATION OF THE FLASHING SYSTEM.
3. REQUIREMENTS AND RECOMMENDATIONS DETAILED IN THE APPLICABLE INSTALLATION SPECIFICATIONS SHALL APPLY IN ADDITION TO THE ABOVE DRAWING.
4. REFER TO SIPLAST PARAPRO AND PARAFLEX FLASHING DETAILS FOR PROPER FLEECE CONFIGURATION WITH BITUMINOUS ROOFING AT APPLICABLE PENETRATIONS AND/OR TRANSITIONS AND REQUIRED DIMENSIONS.

N.T.S

# PARAPRO 123 FLASHING SYSTEM AND PARAFLEX 531 LIQUID FLASHING MEMBRANE

Fleece cutting recommendations

Typical angle iron detail 2: horizontal surfaces



## NOTES:

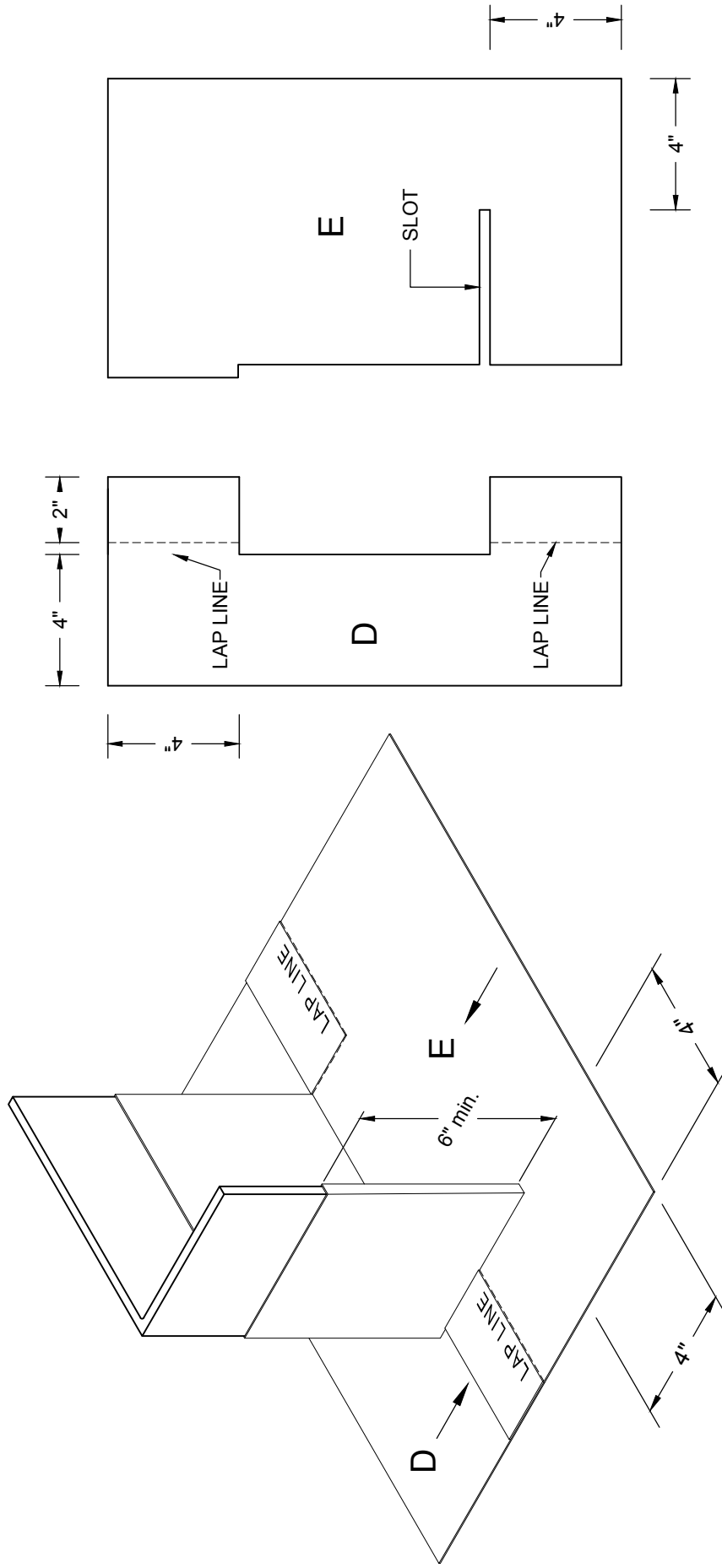
1. SEE SCHEMATIC "FC angle S-1" FOR FLEECE CUTTING TREATMENT OF VERTICAL SURFACES.
2. REFER TO SIPLAST PREPARATION GUIDELINES FOR PROPER SURFACE TREATMENT OF ALL MATERIALS PRIOR TO APPLICATION OF THE FLASHING SYSTEM.
3. REQUIREMENTS AND RECOMMENDATIONS DETAILED IN THE APPLICABLE INSTALLATION SPECIFICATIONS SHALL APPLY IN ADDITION TO THE ABOVE DRAWING.
4. REFER TO SIPLAST PARAPRO AND PARAFLEX FLASHING DETAILS FOR PROPER FLEECE CONFIGURATION WITH BITUMINOUS ROOFING AT APPLICABLE PENETRATIONS AND/OR TRANSITIONS AND REQUIRED DIMENSIONS.

N.T.S

# PARAPRO 123 FLASHING SYSTEM (interply)

Fleece cutting recommendations

Typical angle iron detail 3: horizontal surfaces



## NOTES:

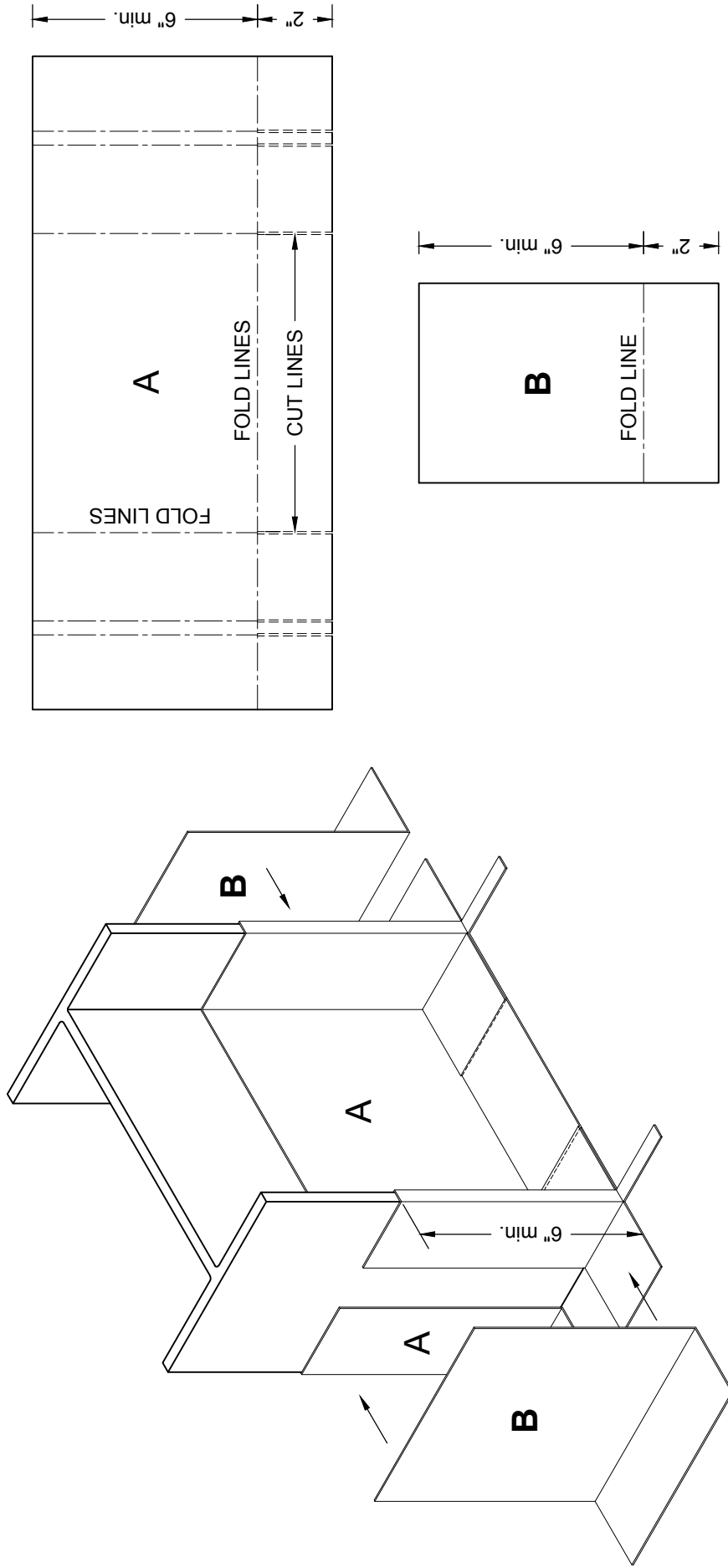
1. SEE SCHEMATIC "FC angle S-1" FOR FLEECE CUTTING TREATMENT OF VERTICAL SURFACES.
2. REFER TO Siplast PREPARATION GUIDELINES FOR PROPER SURFACE TREATMENT OF ALL MATERIALS PRIOR TO APPLICATION OF THE FLASHING SYSTEM.
3. REQUIREMENTS AND RECOMMENDATIONS DETAILED IN THE APPLICABLE INSTALLATION SPECIFICATIONS SHALL APPLY IN ADDITION TO THE ABOVE DRAWING.
4. REFER TO Siplast PARAPRO FLASHING DETAILS FOR PROPER FLEECE CONFIGURATION WITH BITUMINOUS ROOFING AT APPLICABLE PENETRATIONS AND/OR TRANSITIONS AND REQUIRED DIMENSIONS.

N.T.S



# PARAPRO 123 FLASHING SYSTEM AND PARAFLEX 531 LIQUID FLASHING MEMBRANE

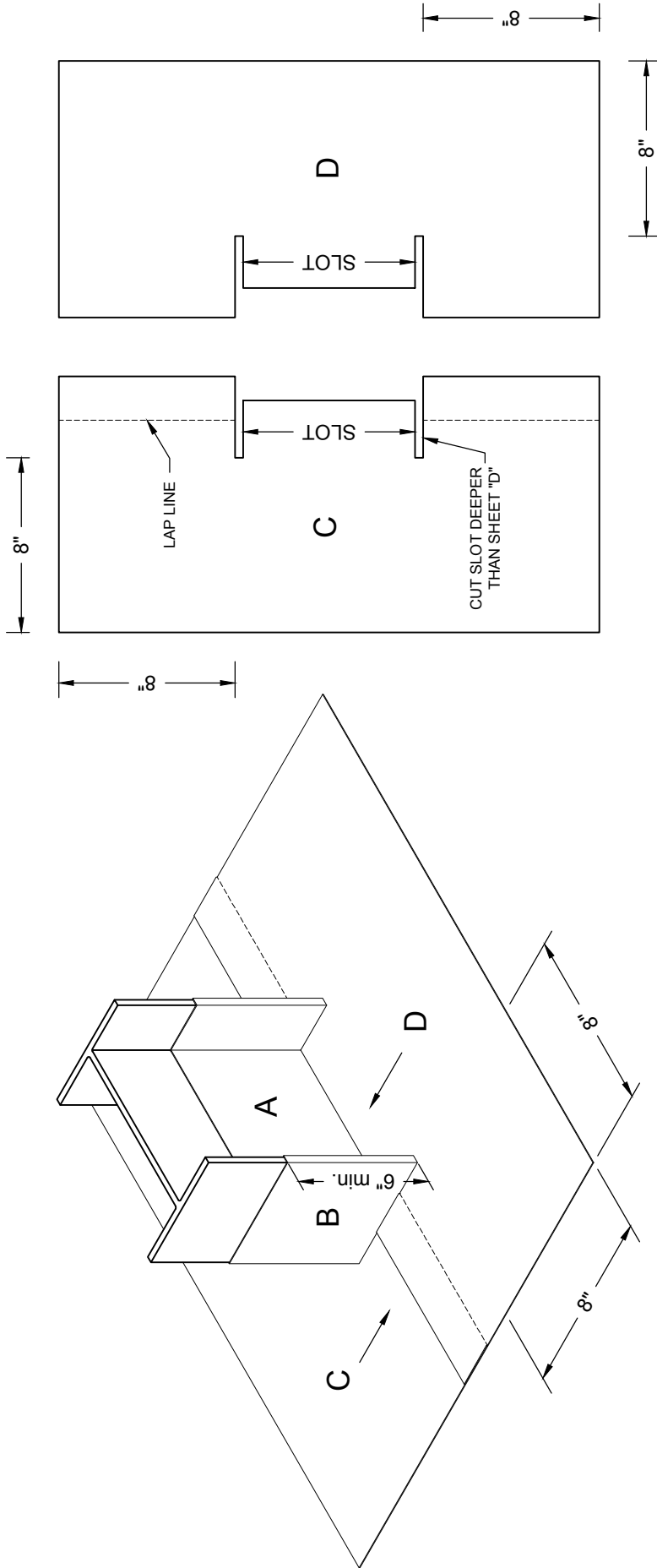
Fleece cutting recommendations  
Typical I-beam detail 1: vertical surfaces



- NOTES:
1. SEE SCHEMATICS "FC I-beam S-2" and "FC I-beam S-3" FOR FLEECE CUTTING TREATMENT OF HORIZONTAL SURFACES.
  2. REFER TO SIPLAST PREPARATION GUIDELINES FOR PROPER SURFACE TREATMENT OF ALL MATERIALS PRIOR TO APPLICATION OF THE FLASHING SYSTEM.
  3. REQUIREMENTS AND RECOMMENDATIONS DETAILED IN THE APPLICABLE INSTALLATION SPECIFICATIONS SHALL APPLY IN ADDITION TO THE ABOVE DRAWING.
  4. REFER TO SIPLAST PARAPRO AND PARAFLEX FLASHING DETAILS FOR PROPER FLEECE CONFIGURATION WITH BITUMINOUS ROOFING AT APPLICABLE PENETRATIONS AND/OR TRANSITIONS AND REQUIRED DIMENSIONS.

# PARAPRO 123 FLASHING SYSTEM AND PARAFLEX 531 LIQUID FLASHING MEMBRANE

Fleece cutting recommendations  
Typical I-beam detail 2: horizontal surfaces

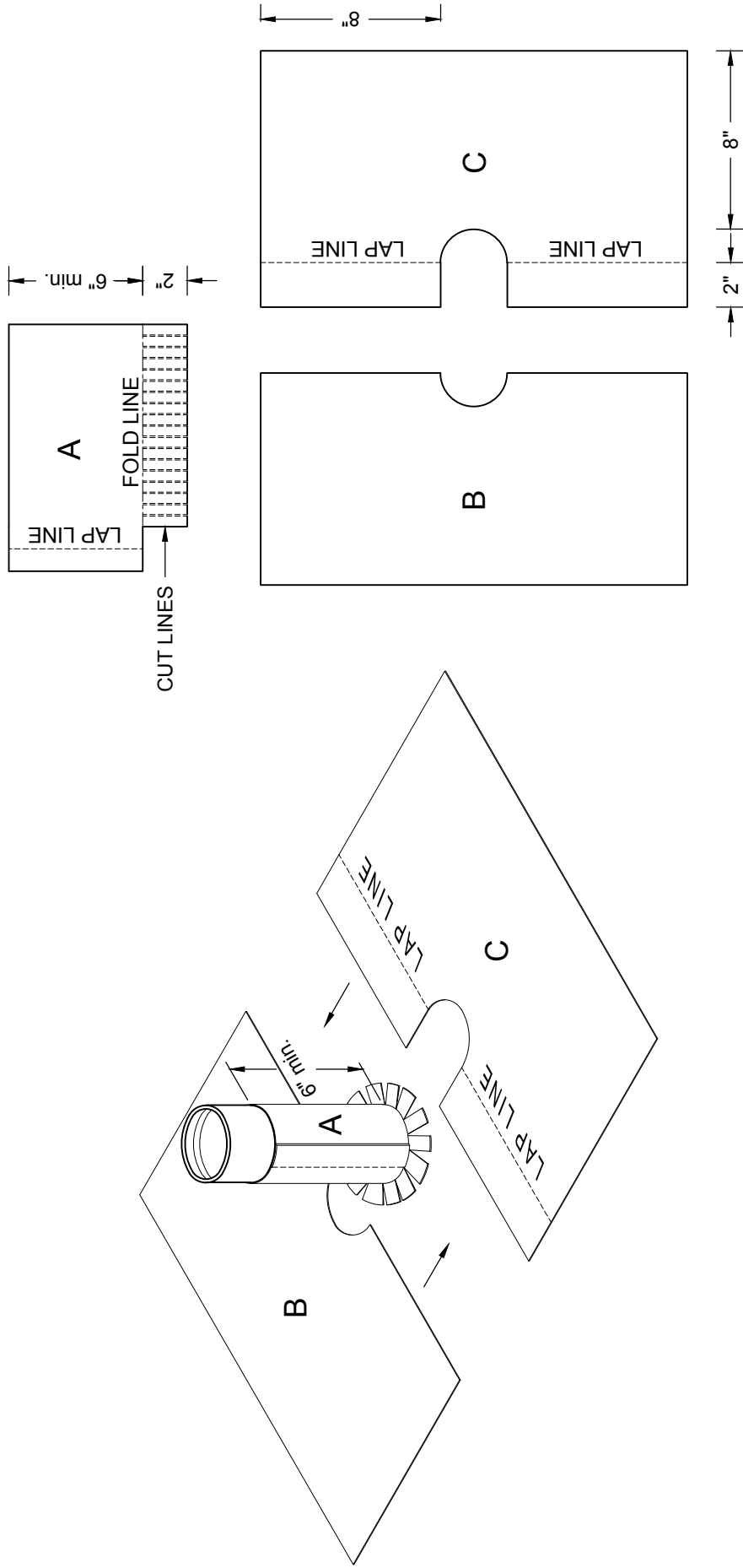


- NOTES:
1. SEE SCHEMATICS "FC I-beam S-1" FOR FLEECE CUTTING TREATMENT OF VERTICAL SURFACES.
  2. REFER TO SIPLAST PREPARATION GUIDELINES FOR PROPER SURFACE TREATMENT OF ALL MATERIALS PRIOR TO APPLICATION OF THE FLASHING SYSTEM.
  3. REQUIREMENTS AND RECOMMENDATIONS DETAILED IN THE APPLICABLE INSTALLATION SPECIFICATIONS SHALL APPLY IN ADDITION TO THE ABOVE DRAWING.
  4. REFER TO SIPLAST PARAPRO AND PARAFLEX FLASHING DETAILS FOR PROPER FLEECE CONFIGURATION WITH BITUMINOUS ROOFING AT APPLICABLE PENETRATIONS AND/OR TRANSITIONS AND REQUIRED DIMENSIONS.

# PARAPRO 123 FLASHING SYSTEM AND PARAFLEX 531 LIQUID FLASHING MEMBRANE

Fleece cutting recommendations

Typical round pipe penetration detail



## NOTES:

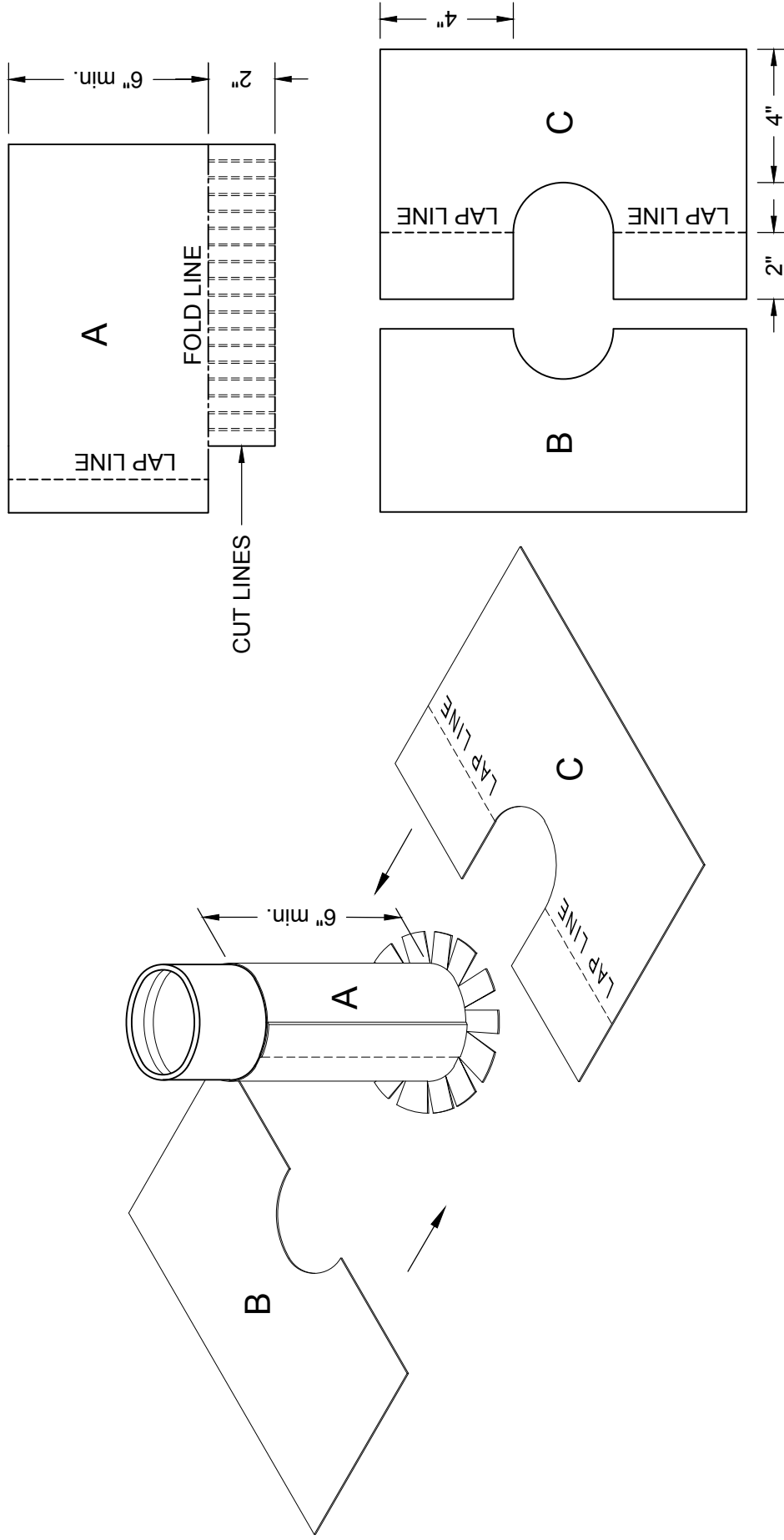
1. REFER TO SIPLAST PREPARATION GUIDELINES FOR PROPER SURFACE TREATMENT OF ALL MATERIALS PRIOR TO APPLICATION OF THE FLASHING SYSTEM.
2. REQUIREMENTS AND RECOMMENDATIONS DETAILED IN THE APPLICABLE INSTALLATION SPECIFICATIONS SHALL APPLY IN ADDITION TO THE ABOVE DRAWING.
3. REFER TO SIPLAST PARAPRO AND PARAFLEX FLASHING DETAILS FOR PROPER FLEECE CONFIGURATION WITH BITUMINOUS ROOFING AT APPLICABLE PENETRATIONS AND/OR TRANSITIONS AND REQUIRED DIMENSIONS.

N.T.S

# PARAPRO 123 FLASHING SYSTEM

Fleece cutting recommendations

Typical round pipe penetration detail (interply)



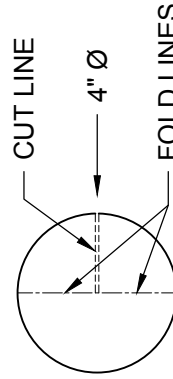
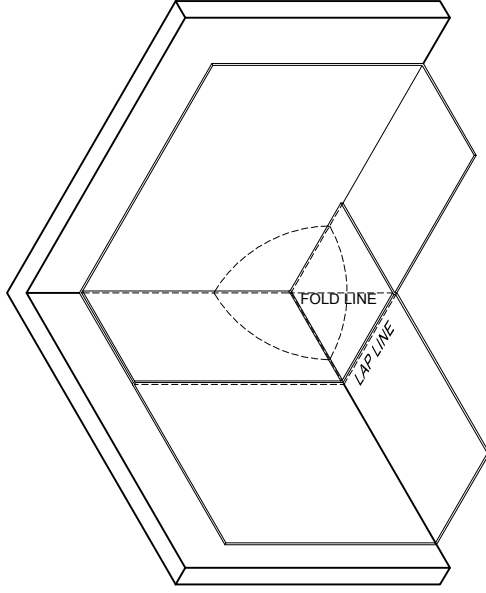
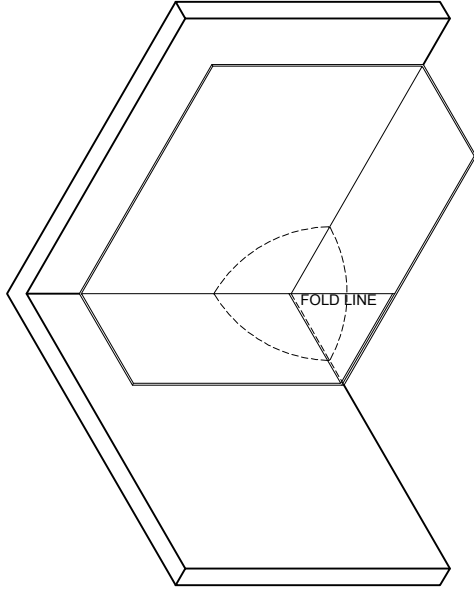
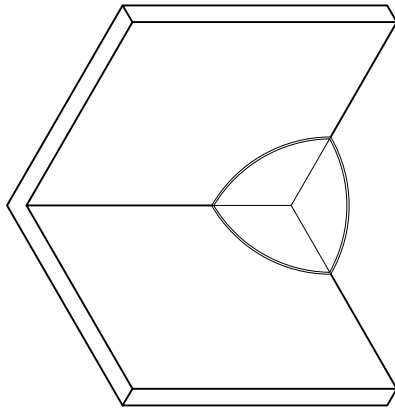
## NOTES:

1. REFER TO SIPLAST PREPARATION GUIDELINES FOR PROPER SURFACE TREATMENT OF ALL MATERIALS PRIOR TO APPLICATION OF THE FLASHING SYSTEM.
2. REQUIREMENTS AND RECOMMENDATIONS DETAILED IN THE APPLICABLE INSTALLATION SPECIFICATIONS SHALL APPLY IN ADDITION TO THE ABOVE DRAWING.
3. REFER TO SIPLAST PARAPRO FLASHING DETAILS FOR PROPER FLEECE CONFIGURATION WITH BITUMINOUS ROOFING AT APPLICABLE PENETRATIONS AND/OR TRANSITIONS AND REQUIRED DIMENSIONS.

N.T.S

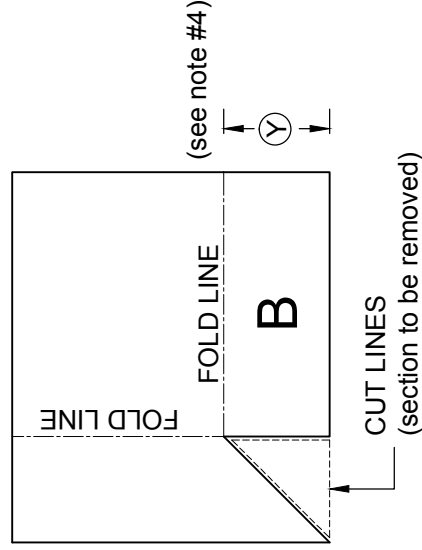
# PARAPRO 123 FLASHING SYSTEM AND PARAFLEX 531 LIQUID FLASHING MEMBRANE

Fleece cutting recommendations  
Inside corner detail

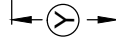


A

(see note #4)



(see note #4)



FOLD LINE

C

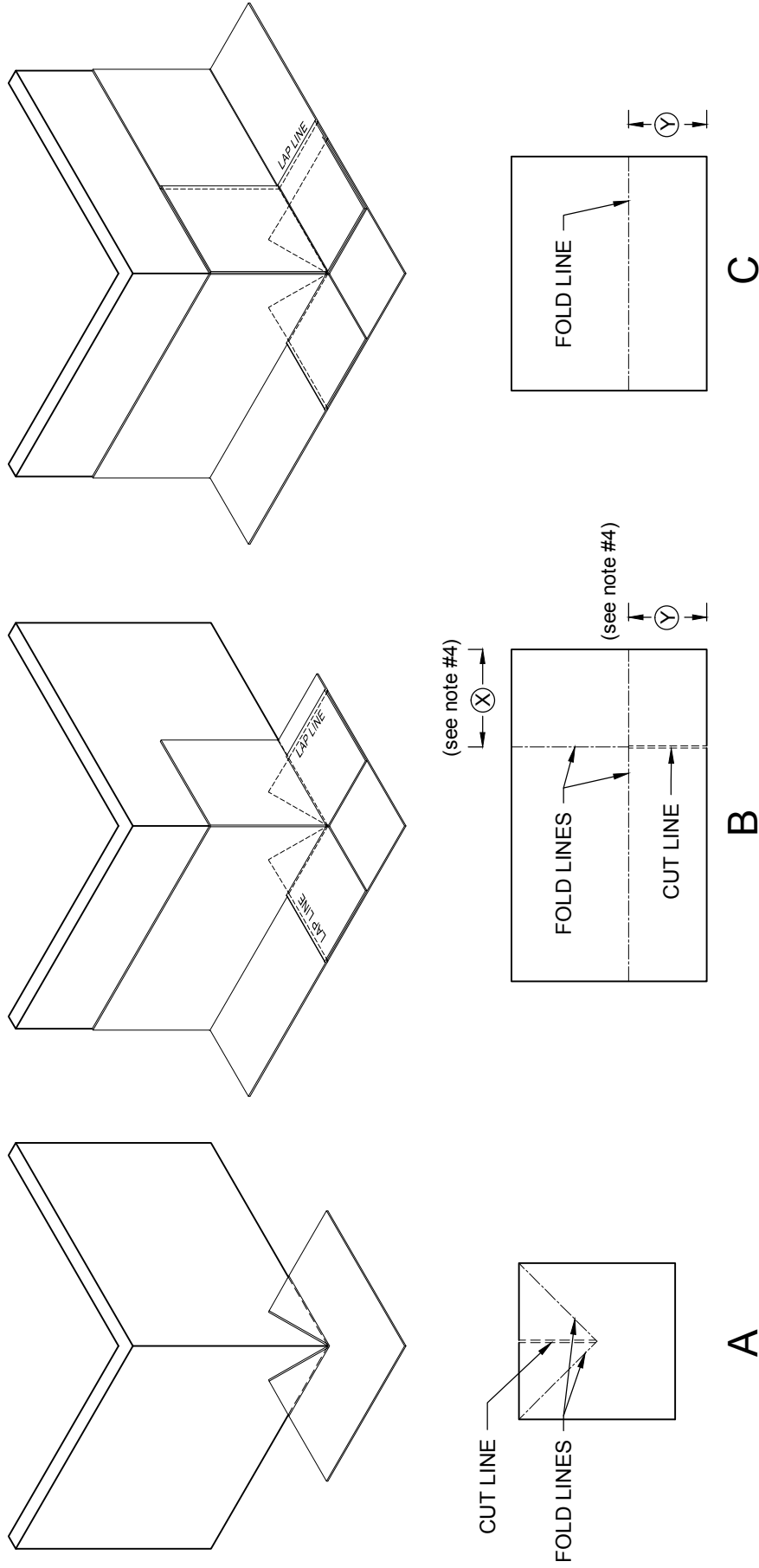
- NOTES:
1. REFER TO SIPLAST PREPARATION GUIDELINES FOR PROPER SURFACE TREATMENT OF ALL MATERIALS PRIOR TO APPLICATION OF THE FLASHING SYSTEM.
  2. REQUIREMENTS AND RECOMMENDATIONS DETAILED IN THE APPLICABLE INSTALLATION SPECIFICATIONS SHALL APPLY IN ADDITION TO THE ABOVE DRAWING.
  3. REFER TO SIPLAST PARAPRO AND PARAFLEX FLASHING DETAILS FOR PROPER FLEECE CONFIGURATION WITH BITUMINOUS ROOFING AT APPLICABLE PENETRATIONS AND/OR TRANSITIONS AND REQUIRED DIMENSIONS.
  4. THE DIMENSION FOR ITEM X SHOULD BE EQUAL TO THE DIMENSION REQUIRED FOR THE ITEM Y AS SHOWN ABOVE.

N.T.S



# PARAPRO 123 FLASHING SYSTEM AND PARAFLEX 531 LIQUID FLASHING MEMBRANE

Fleece cutting recommendations  
Bottom outside corner detail



## NOTES:

1. REFER TO SIPLAST PREPARATION GUIDELINES FOR PROPER SURFACE TREATMENT OF ALL MATERIALS PRIOR TO APPLICATION OF THE FLASHING SYSTEM.
2. REQUIREMENTS AND RECOMMENDATIONS DETAILED IN THE APPLICABLE INSTALLATION SPECIFICATIONS SHALL APPLY IN ADDITION TO THE ABOVE DRAWING.
3. REFER TO SIPLAST PARAPRO AND PARAFLEX FLASHING DETAILS FOR PROPER FLEECE CONFIGURATION WITH BITUMINOUS ROOFING AT APPLICABLE PENETRATIONS AND/OR TRANSITIONS AND REQUIRED DIMENSIONS.
4. THE DIMENSION FOR ITEM ⓧ SHOULD BE EQUAL TO THE DIMENSION REQUIRED FOR THE ITEM ⓧ AS SHOWN ABOVE.

N.T.S



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