

VALUE OF A *BRITE-n-EZ*[™] ROOF INSTALLATION

A *BRITE-n-EZ*[™] TPO Roofing System is one of the most environmentally responsible roof installation systems a person can install. Today, more than half of new low-slow roof systems are white and the movement to white roofs continues to accelerate. There are a number of compelling reasons why this is happening:

✓ A white roof saves energy costs by reducing peak demand.

- Maintenance of air conditioning equipment is reduced and the size of the air conditioning unit need is reduced.
- ✓ A cool white roof extends a roof's life expectancy by significantly reducing the thermal shock of daily high and low temperatures swings.
- ✓ A cool white roof reduces smog from "heat island effect".
- ✓ A cool roof improves our environment by reducing the demand for hydrocarbons for energy and insulating materials.



The *BRITE-n-EZ*TM TPO roof system, which is white and highly reflective, boasts an "**Energy Star**" rating. The brightness of the system reflects the heat of the summer sun thus lowering cooling cost. A *BRITE-n-EZ*TM TPO

ROOF SYSTEM will qualify for LEED points (Leadership in Energy and Environmental Design a Green Building Rating System[®]) and possible energy tax credits. Visit www.energystar.gov to learn more about the benefits of a white roof.



Water Tight Technologies is a member of Cool Roof Rating Council.

Installing a *BRITE-n-EZ*[™] TPO ROOF SYSTEM is:

"THE RIGHT THING TO DO"

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GENERAL INFORMATION

This HANDBOOK has been designed to give the user a GENERAL DESCRIPTION of a *BRITE-n-EZ*TM fully adhered roof system. This HANDBOOK is intended as a broad reference aid and is not intended or meant to be all-inclusive.

Prior to installation of a *BRITE-n-EZ*TM Roof System it is recommended that the installer view the *BRITE-n-EZ*TM ROOF SYSTEM INSTALLATION video on DVD. This video is available from your *BRITE-n-EZ*TM dealer.

BRITE-n-EZ[™] USER CAUTIONS AND WARNINGS!

Excessive leaf and debris build up may permanently stain or discolor any white roof coating or membrane and lessen the benefits available from its inherent reflectivity. Ponding water on a flat roof (where dirt can accumulate and algae grow) will negatively impact the energy efficiency of the roof system. Periodic <u>cleaning is required to maintain the roof's white reflective benefits, particularly if the roof has a very low pitch.</u>

Read Caution labels on primer, adhesive and sealant containers. These materials may contain petroleum distillates that are **extremely flammable.** Care must be taken to avoid open flames. Do not smoke when using these products. Product labels, Material Safety Data Sheet and Product Data Sheets contain information for proper use of these products. Product data sheets and MSDS information can be found at www.britenez.com.

Primers/adhesives/sealants should be used in a well-ventilated area. Avoid inhalation of fumes. Care should be taken to insure fumes do not enter the building through windows or fresh-air-intake ventilation fans.

Avoid primer/adhesive/sealant contact with eyes. Safety glasses should be worn. If adhesive comes in contact with eyes, flush for 15 minutes and call physician.

Avoid primer/adhesive/sealant contact with skin. The use of chemically resistant gloves and *BRITE-n-EZ™ Scrub Pads* are recommended. If adhesive comes in contact with skin, wash with soap and water.

Allow primers and adhesives to adequately dry before adhering as wet primer/adhesives trapped under the membrane will cause blistering.

Safeguard against falling by reading ladder manufacturer's warnings and by establishing a perimeter warning system by using ropes with flags attached. Surfaces can be slippery when wet or covered with frost. Always work with a friend and never work with your back to the roof's edge. Know and follow OSHA fall protection guidelines.

Roof surfaces can be slippery. Care must be taken to avoid falls

on and over the roof edge when walking on the BRITE-n- EZ^{TM} surface. This is particularly true when the roof surface is wet.

Care must be taken with fasteners that penetrate a deck to avoid contact with plumbing or electric wiring.

Roofing over a wet substrate is not good roofing practice. All wet decking and older roofing materials should be removed.

Positive drainage of at least one-eighth inch (1/8") in twelve inches (12") is required for warranty coverage.

Warranty terms and conditions are on the final pages of this booklet. Note: *BRITE-n-EZ*[™] products have been tested to insure compatibility with *BRITE-n-EZ*[™] membrane. Use of non-*BRITE-n-EZ*[™] products will void the extended membrane warranty.

BRITE-n-EZ™ TOOLS NEEDED

The following list is for reference only, as tools and equipment may vary from project to project:

- 2-inch steel or silicone hand roller
- Stiff push broom
- 9-inch paint roller frame & several medium nap, solvent compatible roller covers
- Safety glasses and eye cleaning solution
- Caulk gun
- · Water soluble lumber crayon
- · Screw gun and hammer drill
- · Hacksaw and blades
- · Solvent resistant rubber gloves
- BRITE-n-EZ[™] Scrub Pad
- · Stir stick for adhesives
- Tin snips
- Scissors & tape measure
- Hammer
- · Duct tape
- Chalk Line
- Cotton rags
- Utility knife
- Plastic throw away paint tray
- Paint brush



BRITE-n-EZ[™] Product Listing

- BRITE-n-EZ[™] TPO Membrane (fully adhered system)
- BRITE-n-EZ[™] TPO Self Adhered Membrane
- BRITE-n-EZ[™] TPO/EPDM Solvent Based Bonding Adhesive
- BRITE-n-EZ™ TPO/EPDM Water Based Bonding Adhesive
- BRITE-n-EZ[™] TPO Tape Primer
- BRITE-n-EZ[™] TPO Seam Tape
- BRITE-n-EZ[™] TPO Cover Tape
- BRITE-n-EZ[™] TPO Pipe Boot with Tape
- BRITE-n-EZ[™] Uncured Black Flashing with Tape
- BRITE-n-EZ™ Styrene/Acrylic White Coating
- BRITE-n-EZ[™] Coating Primer
- BRITE-n-EZ™ TPO Detailing Membrane
- BRITE-n-EZ[™] TPO Outside Corner with Tape
- BRITE-n-EZ™ TPO General Purpose Caulk
- BRITE-n-EZ[™] Cut Edge Sealant
- BRITE-n-EZ[™] Membrane Cleaner
- BRITE-n-EZ[™] Pourable Sealer
- BRITE-n-EZ[™] Water Cut Off Mastic
- BRITE-n-EZ[™] Termination Bar
- BRITE-n-EZ[™] Screws and Plates
- BRITE-n-EZ[™] Scrub Pad
- BRITE-n-EZ[™] Steel Hand Roller

While not covered in this installation manual, the contractor experienced in the use of heat welding equipment may also purchase the following products from Water Tight Technologies[®]. These products will not be covered in this installation manual as it is assumed an experienced contractor in heat welding already knows how to install these products.

Heat Welded Accessories for the Experienced Contractor

- BRITE-n-EZ[™] Inside/Outside Corners
- BRITE-n-EZ[™] Walkway Pad Rolls
- BRITE-n-EZ[™] T-Joint Patch
- BRITE-n-EZ[™] Pipe Boot without tape

FOLLOWING IS A DESCRIPTION OF EACH OF THE BRITE-n-EZ™ PRODUCTS. IN ADDITION, THE READER SHOULD ALWAYS REVIEW PRODUCT DATA SHEETS, MSDS INFORMA-TION, LABELS ON PRODUCT CONTAINERS AS WELL AS GEN-ERAL INSTALLATION INSTRUCTIONS THAT FOLLOW IN THIS MANUAL.

BRITE-n-EZ[™] Product Specifications

Go to www.britenez.com. Click on the site map, *BRITE-n-EZ*[™] Roofing Products, Product Specification, and then click on the desired product specification/data sheet.

BRITE-n-EZ[™] Product MSDS Information

Go to www.britenez.com. Click on the site map, *BRITE-n-EZ*[™] Roofing Products, Material Safety Data Sheets, and then click on the desired product MSDS.

BRITE-n-EZ[™] Product Descriptions

BRITE-n-EZ[™] TPO Membrane: BRITE-n-EZ[™] TPO (thermoplastic polyolefin) Membrane systems have been engineered to provide premium performance at a very cost-effective price. Strong, flexible, and durable BRITE-n-EZ[™] TPO Membrane is to be used in a fully adhered application. BRITE-n-EZ[™] TPO Membrane meets or

exceeds all of the requirements for ASTM D6878-03. Membrane is reinforced with a high quality polyester scrim for added strength and stability. Nominal thickness of the membrane is either .045 inch (45 mil) or .060 inch (60 mil) thick. The membrane comes in 5 and 10 foot wide by 50 and 100 foot long rolls.

BRITE-n-EZ[™] TPO Membrane is warranted to be free of manufacturing defects and is warranted for 15 (fifteen) years against deterioration due to weathering <u>when used in a fully adhered application</u>.

Precautionary Data:

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com.

BRITE-n-EZ™ TPO Self Adhered Membrane: BRITE-n-EZ™ TPO (Thermoplastic Polyolefin) Membrane (Peel and Stick) meets or exceeds all of the requirements for ASTM D6878-03. Membrane is reinforced with a high quality polyester scrim for added strength and stability. Nominal thickness of the membrane is .045 inch (45 mil) thick or .060 inch (60 mil) with .008 inch (8 mils) of self-adhering butyl adhesive on the back. The membrane comes in 5 and 10 foot wide by 50 and 100 foot long rolls. The membrane has a plastic release liner protecting the adhesive until it is time to adhere it to the substrate. This plastic release liner may be recycled when removed from the membrane. The release liner is in two sections so that the liner may be removed from one half at a time as membrane is adhered to the substrate. The area where the seam tape is applied is void of adhesive.

This product is warranted for 10 (Ten) years against manufacturing defects and deterioration due to weathering. See warranty section for more information.

Precautionary Data:

Please review installation instructions that follow in this book and, as

well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com.

BRITE-n-EZ™ TPO/EPDM Solvent Based Bonding Adhesive:

This newly formulated Solvent Based Bonding Adhesive will work to adhere BRITE-n-EZ[™] TPO Membrane to ridged board insulations without a foil facer, plywood, OSB, concrete, block or brick. This adhesive may not be used on any form of polystyrene insulation (bead board, pink or blue board) as the adhesive will soften the board surface and not provide adequate adhesion. This yellow colored adhesive comes in 1-gallon cans or 5-gallon pails. Average coverage is 60 sq. ft. per gallon total roof area when applied to both surfaces. Coverage may vary depending on the porosity of the substrate. Apply TPO Solvent Based Bonding Adhesive with a solvent resistant medium nap paint roller being certain both surfaces are clean, dry, and grease free. Both surfaces to be bonded must be coated with the bonding adhesive as this is a contact adhesive. The adhesive should be allowed to dry until it does not stick to a dry finger touch. An open time of five to sixty minutes may be required to allow for proper drying before assembly, depending on ambient conditions. If blisters occur after the surfaces have been mated it is because the adhesive was not completely dry.

Toluene is excellent for post application clean up. Avoid prolonged and repeated contact with skin. Shelf life is 1 year when stored at temperature no higher than 90 degrees F in unopened containers. ROTATE STOCK.

PLEASE NOTE:

BRITE-n-EZ[™] TPO/EPDM Solvent Based Bonding Adhesive (Item # TBAS5 and TBAS1) also carries the RUBBERALL[®] logo and may be used for both BRITE-n-EZ[™] TPO and RUBBERALL[®] EPDM. IT IS IMPORTANT TO NOTE THAT THIS NEWLY FORMULATED TPO/EPDM Solvent Based Bonding Adhesive (Item # TBAS5 and TBAS1) LOOKS SIMILAR TO RUBBERALL[®] EPDM ADHESIVE (Item # BAS5 and BAS1) HOWEVER THE FORMULATION OF

THESE TWO PRODUCTS ARE MUCH DIFFERENT. <u>RUBBERALL® EPDM BONDING ADHESIVE (Item # BAS5 and</u> <u>BAS1) WILL NOT WORK WITH BRITE-n-EZ™ TPO MEMBRANE.</u>

Precautionary Data:

This product is flammable. Vapors may cause flash fires. Vapors may ignite explosively under certain conditions. Keep away from fire, sparks, and sources of heat. Close all doors and windows so vapors do not travel indoors. Extinguish all flames and pilot lights. Turn off electric motors, stoves, heaters, or any source of ignition during use and until all vapors have been dispersed. Do not smoke. Close containers after use. Product may cause possible skin irritations and/or allergic sensitivity in susceptible subjects. Provide adequate ventilation.

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com.

BRITE-n-EZ[™] **TPO/EPDM Water Based Bonding Adhesive:**

BRITE-n-EZ[™] TPO/EPDM Water Based Bonding Adhesive is environmentally friendly with low VOC's. This adhesive may be used on vertical and horizontal surfaces to adhere BRITE-n-EZ[™] TPO Membrane to non-foil faced ridged foam insulation, polystyrene insulation, high density wood fiberboard, plywood, OSB, concrete, block or brick. Because BRITE-n-EZ[™] TPO is much stiffer than RUBBER-ALL[®] EPDM and tends to bridge low spots on the roof surface, BRITE-n-EZ[™] Water Based Bonding Adhesive must be applied to both the substrate surface and the TPO membrane surface. Apply the adhesive with a medium nap paint roller and allow the adhesive to dry until it is tacky (not wet) before mating the two surfaces.

Do not use this adhesive if the ambient temperature will be below 40 degrees Fahrenheit during the next 48 hours. Average coverage rate is 100 sq. ft. per gallon total roof area when applied to both surfaces. This material should not be allowed to freeze. If the product looks like cottage cheese when opened it should not be used.

Shelf life is approximately 1 year when stored in a warm room with temperature range between 40 and 80 F degrees. ROTATE STOCK.

PLEASE NOTE:

BRITE-n-EZ[™] TPO/EPDM Water Based Bonding Adhesive also carries the RUBBERALL[®] logo and may be used for both BRITE-n-EZ[™] TPO and RUBBERALL[®] EPDM roofing systems. The product label indicates the product is applied to both surfaces. However, when this product is used as an adhesive for EPDM on a horizontal surface, the adhesive may be applied at double the rate per square foot to the substrate surface only and the membrane lay in is done while the adhesive is still wet. This difference in application is because the EPDM membrane is very supple (unlike TPO which is stiffer) and will conform to variations in the roofing surface when broomed or rolled.

Precautionary Data:

Store adhesive indoors in original, unopened container at temperatures between 60°F (16°C) and 80°F (27°C). PROPERTIES OF ADHESIVE ARE IMPAIRED IF IT IS ALLOWED TO FREEZE. When exposed to lower temperatures, restore to room temperature prior to use.

Cleanup with warm soap and water while material is still wet. Once dried, it may be cleaned with very hot water, some mild citric cleaner or paint thinner. Install at temperatures above 40°F (4.4C). Keep adhesive from freezing. Use with adequate ventilation. Avoid prolonged breathing of vapors or repeated contact with skin. DO NOT DILUTE OR CONTAMINATE THIS MATERIAL. Close container after use.

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com.

BRITE-n-EZ™ TPO Tape Primer: BRITE-n-EZ™ TPO Tape Primer is a solvent-based primer designed to clean and prime BRITE-n-

 EZ^{TM} TPO Membrane prior to application of any BRITE-n- EZ^{TM} TPO tape product. TPO Tape Primer must be applied with a BRITE-n- EZ^{TM} Scrub Pad. BRITE-n- EZ^{TM} TPO Tape Primer can be used on galvanized steel, stainless steel, and aluminum/metal drip edge in conjunction with the application of BRITE-n- EZ^{TM} taped products on these surfaces.

Membrane surfaces must be clean, dry and free of foreign materials. Excessively dirty membrane should be cleaned with $BRITE-n-EZ^{TM}$ Membrane Cleaner and a clean rag. The solids suspended in the *TPO Tape Primer* tend to settle to the bottom of the container and should be thoroughly stirred before use. During use, re-stir frequently (every 15 - 20 minutes). The primer must be used full strength - **DO NOT DILUTE.**

It is important to store product in original, unopened container, indoors, and out of direct sunlight at temperatures below 80°F. The shelf life is approximately 24 months if stored in original unopened containers at temperatures between 40° and 80°F. ROTATE STOCK.

BRITE-n-EZ[™] TPO taped products (noted in the following sections) will not adhere, or perform over time, if BRITE-n-EZ[™] TPO Tape Primer is not used or if it is not applied per label directions.

Precautionary Data:

This product is flammable. Vapors may cause flash fires. Vapors may ignite explosively under certain conditions. Keep away from fire, sparks, and sources of heat. Do not smoke. Close container after use. Product may cause possible skin irritations and/or allergic sensitivity in susceptible subjects. Always use a *BRITE-n-EZ*TM *Scrub Pad* to avoid contact with skin.

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com. **BRITE-n-EZTM TPO Seam Tape:** BRITE-n-EZTM Seam Tape is a white butyl tacky tape used to adhere one TPO membrane surface to another. Seam Tape is available in 3" x 25' rolls and 3" x 100' rolls. BRITE-n-EZTM Seam Tape has been formulated to provide high initial strength in both sheer and peel when applied to TPO membrane. Its performance over the full range of rooftop weather is unsurpassed as it is unaffected by heat or cold. BRITE-n-EZTM Tape Primer must always be applied to the membrane surface, with a BRITE-n-EZTM Scrub Pad, prior to applying the Seam Tape. While the tape feels tacky, if the membrane surface is not first primed the seam will fail. Roll entire surface with a steel hand roller after mating the surfaces.

BRITE-n-EZ[™] Seam Tape is a cured material and will not degrade in normal warehouse storage. In time, the release paper may become difficult to remove. For this reason, the recommended shelf life is 12 months.

Precautionary Data:

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com.

BRITE-n-EZTM Cover Tape: BRITE-n-EZTM Cover Tape comes in rolls 6" x 25' and 6" X 100'. The cover tape is comprised of .030" (30 mils) TPO unreinforced membrane laminated to .008 (8 mils) of white cured butyl adhesive that is specially formulated to adhere to TPO Membrane. The adhesive tape has a release paper applied. Cover Tape is used to cover cuts in the field membrane or over the exposed fasteners attaching metal drip edge. It is also used as an end or roll seam cover on BRITE-n-EZTM self adhered systems. Surfaces must be primed with BRITE-n-EZTM TPO Tape Primer before the cover strip is installed. Once the Cover Tape is in place it must be rolled with a steel hand roller.

BRITE-n-EZ[™] Cover Tape will not degrade in normal warehouse

storage. In time, the release paper may become difficult to remove. For this reason, the recommended shelf life is 12 months.

BRITE-n-EZTM Cover Tape is also used to repair membrane if it is damage by falling limbs etc. Be certain to clean the area to be repaired with $BRITE-n-EZ^{TM}$ Membrane Cleaner and prime the area with $BRITE-n-EZ^{TM}$ Tape Primer using a Scrub Pad.

Important: *BRITE-n-EZ*[™] *Tape Primer* must always be applied to the membrane surface, with a *BRITE-n-EZ*[™] *Scrub Pad*, prior to applying any accessory that uses butyl adhesive as a tape to secure it to the substrate. While the tape feels tacky, if the membrane surface is not first primed the attachment of the accessory will fail. Roll entire surface with a steel hand roller after mating the accessory to the membrane surfaces.

Precautionary Data:

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com.

BRITE-n-EZTM TPO Pipe Boot with Tape: BRITE-n-EZTM Multi-size (1" to 6 7/8" diameter), pre-molded, *TPO Pipe Boot* is used to flash round penetrations in the roof top that are accessible from the top. This pipe boot has a white butyl self-adhering tape backing that is formulated to adhere to TPO membrane. The adhesive tape has a release paper applied. *Tape Primer* must be applied to the TPO membrane surface prior to setting the *TPO Pipe Boot*. A bead of *RUBBERALL*[®] Water Cut-Off Mastic should be applied under the top ring of the *TPO Pipe Boot* and then the boot is clamped with stainless steel pipe boot clamp which are included with the product.

Important: **BRITE-n-EZTM TPO Tape Primer must always be** applied to the membrane surface, with a **BRITE-n-EZTM Scrub** *Pad*, prior to applying any accessory that uses butyl adhesive as a tape to secure it to the substrate. While the tape feels tacky, if the membrane surface is not first primed the attachment of the accessory will fail. Roll entire surface with a steel hand roller after mating the accessory to the membrane surfaces.

Precautionary Data:

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com.

BRITE-n-EZ™ Uncured Black Flashing With Tape: TPO membrane is not elastomeric and therefore cannot be forced in varying shapes without the use of a hot air welder. Water Tight Technologies® has developed an effective flashing system when hot air welding is not practical. BRITE-n-EZ[™] Uncured Black Flashing With Tape is a moldable black uncured EPDM membrane used for flashing details, protrusions, T-Joint patches and field seams incorporating angle changes. This flashing material has a white butyl self-adhering tape backing that is formulated to adhere to TPO membrane. The adhesive tape has a release paper applied. The black EPDM is uncured meaning its molecules were not cross linked under heat and pressure in the factory. Once molded into the shape of the outside corner, pipe boot etc., the heat and sun on the roof top will cure (cross link) the flashing material so that it becomes elastomeric. Uncured Black Flashing with Tape comes as "Patches" (12" x 12") and in rolls 12" x 25'.

This product should be stored in original unopened cartons at temperatures between 60 degrees F and 80 degrees F until ready for use. During hot weather, do not expose this product to sunlight/elevated temperatures until ready for use. The black uncured EPDM top surface will start to cure even in the warehouse thus preventing the material to be formed for flashing details on the roof top. It is therefore important to rotate stock. Shelf life for this product when stored properly is 1 year. The white butyl tape backing on $BRITE-n-EZ^{TM}$ Uncured Black Flashing with Tape is a cured material and will not degrade in normal warehouse storage. Should the black

EPDM become cured the flashing product could still be used for repair patches.

Important: *BRITE-n-EZ*[™] *Tape Primer* must always be applied to the membrane surface, with a *BRITE-n-EZ*[™] *Scrub Pad*, prior to applying any accessory that uses butyl adhesive as a tape to secure it to the substrate. While the tape feels tacky, if the membrane surface is not first primed the attachment of the accessory will fail. Roll entire surface with a steel hand roller after mating the accessory to the membrane surfaces.

Precautionary Data:

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com.

BRITE-n-EZ[™] Styrene/Acrylic Coating (for Black EPDM

Flashing): Because the *BRITE-n-EZ*TM Uncured Black Flashing With Tape is black in color it must be painted white to match the white *BRITE-n-EZ*TM *TPO Membrane*. Water Tight Technologies® has developed a proprietary coating that will adhere to EPDM. *BRITE-n-EZ*TM *Styrene/Acrylic Coating* is a high solids elastomeric, water based coating that is applied with a small roller or paint brush. Prior to applying this product the black membrane must first be primed with *BRITE-n-EZ*TM *Styrene/Acrylic Coating Primer* using a paint brush. *BRITE-n-EZ*TM *Styrene/Acrylic Coating* should not be applied if the ambient temperature will be below 40 degrees Fahrenheit within the next 24 hours.

BRITE-n-EZ[™] Styrene/Acrylic Coating comes in 1 and 5 gallon containers. Coverage rate is 250 square feet per gallon. Two applications of coating a few hours apart are often required for adequate hide. Shelf life is 1 year.

Precautionary Data:

BRITE-n-EZTM Styrene/Acrylic Coating is a maintenance item intended to improve esthetics and will require re-coating from time to time. This coating is not an integral part of the **BRITE-n-EZTM** roofing system or Code Ratings. Periodic inspections of the roof systems should be conducted by the owner with the subsequent re-application of **BRITE-n-EZTM** Styrene/Acrylic Coating to areas that may need touch-ups for esthetic purposes.

Always store BRITE-n- EZ^{TM} Coating in original, unopened containers indoors at temperatures between 16C and 27C (60F and 80F). Do not allow stored BRITE-n- EZ^{TM} Styrene/Acrylic Coating to freeze. If BRITE-n- EZ^{TM} Coating does freeze, do not use and replace with new material.

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling BRITE-n- EZ^{TM} products or online at www.britenez.com.

BRITE-n-EZTM Coating Primer: $BRITE-n-EZ^{TM}$ Coating Primer is a solvent based product to encourage $BRITE-n-EZ^{TM}$ Styrene/Acrylic Coating adhesion to any EPDM membrane such as $BRITE-n-EZ^{TM}$ Uncured Black Flashing with Tape.

The EPDM flashing must be clean, dry and free of foreign materials. Excessively dirty membrane should be cleaned with BRITE-n- EZ^{TM} Membrane Cleaner and a clean rag. The solids suspended in the Coating Primer tend to settle to the bottom of the container and should be thoroughly stirred before use. During use, re-stir frequently (every 15 - 20 minutes). The primer must be used full strength - **DO NOT DILUTE.**

BRITE-n-EZ[™] Coating Primer comes in 1 quart, 1 gallon, and 5 gallon containers. Coverage rate is 200 to 250 square feet per gallon. It is important to store product in original, unopened container, indoors, and out of direct sunlight at temperatures below 80°F. The shelf life

is approximately 24 months if stored in original unopened containers at temperatures between 60° and 80°F. ROTATE STOCK.

Precautionary Data:

This product is flammable. Vapors may cause flash fires. Vapors may ignite explosively under certain conditions. Keep away from fire, sparks, and sources of heat. Do not smoke. Close container after use. Product may cause possible skin irritations and/or allergic sensitivity in susceptible subjects. Use a *BRITE-n-EZ*TM *Scrub Pad* or solvent resistant paint roller or brush to avoid contact with skin.

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com

BRITE-n-EZTM TPO Detailing Membrane: BRITE-n-EZTM Detailing Membrane is a .055" (55 mil.) thick TPO membrane that comes in rolls 24" x 50'. It is used as an alternative vertical flashing membrane when it is not practical to transition the field sheet from horizontal to vertical to go up the parapet wall. It is also used as flashing extension when a higher flashing extension is required. The membrane is fully adhered to the vertical wall using one of the BRITE-n-EZTM adhesives. The Detailing membrane is sealed at the base of the wall or on the horizontal surface with BRITE-n-EZTM Seam Tape and it is terminated at the top with BRITE-n-EZTM Termination Bar.

Precautionary Data:

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com. **BRITE-n-EZTM TPO Outside Corner with Tape**: BRITE-n-EZTM TPO Outside Corner with Tape is used to flash outside corners. This is a pre-molded corner that is 6" by 6" with and sticky back. BRITE-n-EZTM TPO Outside Corner is offered as a convenience to the contractor. Because most corners are not exactly 90 degrees, in most instances, it is more advantageous to use BRITE-n-EZTM Uncured Black Flashing With Tape to insure the water tight integrity of the corner flashing detail.

Precautionary Data:

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com.

BRITE-n-EZ[™] TPO General Purpose Caulk: BRITE-n-EZ[™]

General Purpose Caulk is a high quality sealant with excellent adhesion used in conjunction with $BRITE-n-EZ^{TM}$ TPO systems as a fastener sealer, termination bar caulk, and TPO cut edge/seam edge treatment. This caulk can be used in non-roofing applications not specifically associated with the initial installation of the roofing system. This sealant can be used to caulk or seal sheet metal, masonry, brick and concrete block.

BRITE-n-EZ[™] General Purpose Caulk estimated coverage rate for a continuous bead of 1/4" x 1/4" is 20 - 25 linear feet per 10.1 oz. cartridge. Shelf life of one year can be expected when stored in original sealed container at temperatures between 60° F (16° C) and 80° F (27° C). Shelf life will be shortened if exposed to elevated temperatures.

Precautionary Data:

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com.

BRITE-n-EZTM Cut Edge Sealant: TPO membrane when manufactured has sealed edges on each side of the roll so that water cannot wick into the scrim. There is exposed scrim at end of rolls when cut in the factory and when the rolls are cut on the roof. This exposed scrim must be sealed. A bead of BRITE-n-EZTM General Purpose Caulk works quite well to seal and protect the exposed scrim. Some contractors feel that this bead of caulk is less attractive on the roof top and prefer to use BRITE-n-EZTM Cut Edge Sealant. BRITE-n-EZTM Cut Edge Sealant is a polymer based sealant used to seal all cut edges of BRITE-n-EZTM TPO Membrane where the polyester reinforcement is exposed.

Clean the area around the cut edge with BRITE-n- EZ^{TM} Membrane Cleaner. Apply approximately a 1/8" (3.2 mm) to 1/4" (6.4 mm) diameter bead of sealant to all cut edges of BRITE-n- EZ^{TM} TPO with exposed reinforcement.

BRITE-n-EZ[™] Cut Edge Sealant is packaged in pint bottles. Coverage rate when applying a 1/8 inch bead is 100 linear feet. Shelf life is on year from date of manufacture.

This product is offered for esthetic purpose only, $BRITE-n-EZ^{TM}$ General Purpose Caulk is the preferred product for membrane edge treatment by most contractors.

Precautionary Data:

This product is flammable. Vapors may cause flash fires. Vapors are harmful if inhaled. Keep away from fire, sparks and sources of heat. Do not smoke. Close container after use. Product contains Benzene and may be classified as a hazardous waste.

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com. **BRITE-n-EZ™ Membrane Cleaner:** BRITE-n-EZ™ Membrane Cleaner is used to clean both RUBBERALL® EPDM and BRITE-n-EZ™ TPO surfaces before installing metal drip edge cover strips, tjoint patches, cut edge sealant, etc. Always store Membrane Cleaner at room temperature between 60 degrees F and 80 degrees F in the originally sealed explosion-proof container away from all sources of direct heat and ignition.

Membrane Cleaner is available in one-quart and one-gallon cans. A shelf life of twenty four (24) months can be expected when properly stored. Keep in well-ventilated area. *BRITE-n-EZ™ Membrane Cleaner* is extremely flammable and must be kept away from electrical equipment, sparks, open flames and other sources of ignition. Avoid breathing vapors and use only in well-ventilated area. Handle with impervious gloves and goggles.

Precautionary Data:

This product is flammable. Vapors may cause flash fires. Vapors may ignite explosively under certain conditions. Keep away from fire, sparks, and sources of heat. Close all doors and windows. Extinguish all flames and pilot lights. Turn off electric motors, stoves, heaters, or any source of ignition during use and until all vapors have been dispersed. Do not smoke. Close containers after use. Product may cause possible skin irritations and/or allergic sensitivity in susceptible subjects.

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com.

BRITE-n-EZTM Pourable Sealer: BRITE-n-EZTM Pourable Sealer is designed for sealing penetration pockets created to seal around protrusions through the BRITE-n-EZTM or RUBBERALL®</sup> membrane. Pourable Sealer is a two part material that when mixed on the roof top is slightly less than one gallon and is gray in color. After the material has cured it may be coated with BRITE-n-EZTM Styrene/Acrylic Coating</sup> to achieve a consistent bright look to the entire roof top.

One should always store in original unopened cartons at temperatures between 60°F and 80°F until ready for use. When exposed to lower temperatures, restore to room temperature prior to use. Shelf life of one year can be expected if stored in original sealed container (unmixed) at temperatures between 60°F and 80°F. Shelf life will be shortened if exposed to elevated temperatures.

Precautionary Data:

Please review installation instructions that follow in this book and, as well, see product specifications at www.britenez.com.

Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling BRITE-n- EZ^{TM} products or online at www.britenez.com.

BRITE-n-EZ™ Water Cut-Off Mastic: BRITE-n-EZ™ Water Cut-Off Mastic is the same product used for RUBBERALL® systems and carries the RUBBERALL® logo. Water Cut-Off Mastic serves as a compression gasket preventing contaminates access beneath the roof system where the membrane has been mechanically terminated. This gray, butyl based mastic is applied between the substrate and membrane prior to installing *Termination Bar* and prior to installing the pipe boot clamp. It is also used as a temporary overnight sealant or water-stop.

Coverage rate is approximately 10 lineal feet (3.1 m) per 10.1 oz. cartridge of 3/8" to 1/2" bead. Shelf life of one year can be expected if stored in original containers between 60° F (16° C) and 80° F (27° C). Shelf life will be shortened if exposed to sustained elevated temperatures.

Precautionary Data:

BRITE-n-EZ[™] Water Cut-Off Mastic is flammable—vapors can form explosive mixture with air. Keep away from all sources of sparks and open flames, including cigarettes, cigars, and pipes. A red caution label is required when shipping.

Please review installation instructions that follow in this book and, as

well, see product specifications at www.britenez.com. Refer to Material Safety Data Sheet (MSDS) for additional information. MSDS are available from dealers selling *BRITE-n-EZ*[™] products or online at www.britenez.com.

BRITE-n-EZ[™] Termination Bar: BRITE-n-EZ[™] Termination Bar is the same as *RUBBERALL*[®] Termination Bar and carries the *RUB-BERALL*[®] brand on the box. Termination Bar comes in 5' or 10' lengths of aluminum bar with holes 6 inches O.C. used to mechanically secure membrane at walls, curbs, chimneys, etc. This bar is often used in place of metal drip edge on fascias. All holes in *Termination Bar* must be filled with appropriate fasteners.

BRITE-n-EZ[™] Screws and Plates: *BRITE-n-EZ[™] Screws and Plates* are the same as *RUBBERALL*[®] *Screws and Plates* and carry the *RUBBERALL*[®] brand on the box. Screws and plates are used to install insulation board to the roof deck. The fastening pattern should be one set (screw and plate) to every two sq. ft. of insulation board for the perimeter of roofs and one set to every four sq. ft. of insulation board for the remainder of the roof. You should review the "*BRITE-n-EZ[™]* Roof Surface Preparation" section in this manual for the proper fastening pattern. *BRITE-n-EZ[™] Screws and Plates* are all purpose, heavy duty fastners of varying lengths with galvanized 3" plates. *Screws and Plates* come in varying package sizes and may be ordered unassembled, assembled or separately(i.e. screws or plates).

BRITE-n-EZ[™] Scrub Pad: BRITE-n-EZ[™] Scrub Pad is the same as *RUBBERALL*[®] Scrub Pad and carries the *RUBBERALL*[®] brand on the box. This Scrub Pad is a specially designed pad and handle that is used to roughen the membrane surface and apply BRITE-n-EZ[™] TPO Tape Primer without the user coming in contact with the primer. Its use is highly recommended.

BRITE-n-EZ[™] Steel Hand Roller: BRITE-n-EZ[™] Steel Hand Roller is the same as RUBBERALL[®] Steel Hand Roller and carries the RUBBERALL[®] brand on the box. This hand roller is a specially

designed hand roller that is of sufficient weight to roll seams and flashing details without tiring the user. Its use is highly recommended.

ROOF SURFACE PREPARATION

BRITE-n-EZ[™] TPO Membranes cannot be adhered directly to the existing substrate in a reroofing application. The existing roof should be cleared of all loose gravel, ballast and debris. Select the appropriate recover board for the adhesive that is to be used:

- BRITE-n-EZ[™] Solvent Based Bonding Adhesive is appropriate to attach BRITE-n-EZ[™] TPO Membrane to ridged board insulations without a foil facer, plywood, OSB, concrete, block or brick. This adhesive may not be used on any form of polystyrene insulation (bead board, pink or blue board) as the adhesive will soften the insulation board surface and not provide adequate adhesion. If polystyrene insulation is used always install an additional recover board on top of the poly styrene insulation that is compatible with BRITE-n-EZ[™] Solvent Based Bonding Adhesive.
- BRITE-n-EZ[™] TPO/EPDM Water Based Bonding Adhesive is appropriate to attach BRITE-n-EZ[™] TPO Membrane to nonfoil faced ridged foam insulation, polystyrene insulation, high density wood fiberboard, plywood, OSB, concrete, block or brick.

Closely lay all insulation boards together, staggering all of the joints. All spaces, larger than one-quarter of an inch, must be filled to provide a uniform, smooth surface. When using more than one layer of insulation, or when an insulation board and recover board are layered, one should always stagger joints on subsequent layers.

Screws and deck plates shall be applied at the minimum rate of eight (8) per 4 ft. x 8 ft. sheet of insulation, and five (5) per 4 ft. x 4 ft. sheet or as required by the insulation manufacturer. When installing insulation around the perimeter, the fastening pattern is one (1) screw and one (1) deck plate every two (2) square feet (that is sixteen fasteners per 4 ft. x 8 ft. sheet). Examples of fastening patterns are shown in Figure 1. **NOTE:** Extra fasteners should be installed

around protrusions such as pipes, chimneys, skylights and irregularities in the roof deck.

When attaching insulation to a corrugated deck, select an appropriate length of screw to extend 1 inch below the valley of the deck plate. Attach insulation board to concrete by pre-drilling and using metal anchor pins. Insulation may also be attached using one of the two part foams currently on the market. Always follow foam manufactures directions.

Do not install more insulation than can be covered with *BRITE-n*- EZ^{TM} *Membrane* by the end of the day.

Reroofing over a wet substrate is not good roofing practice. All wet material should be removed and replaced.

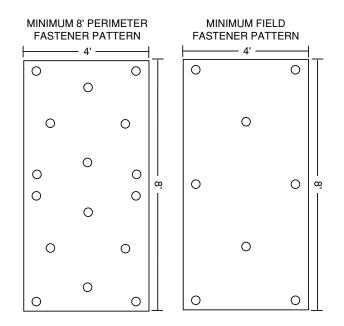
When attaching plywood or OSB over an existing roof membrane never use nails as they tend to back out and may puncture the membrane. Use heavy duty, rust resistant screws. The screw should be counter sunk so that they do not puncture the membrane.

The roof surface must be dry. Moisture will cause poor membrane adhesion and blistering.

The roof surface should be swept to remove dirt, dust and other loose particles.

Good roofing practice dictates that the roof surface must have positive drainage of at least 1/8 inch in 12 inches.

Figure 1 — Fastening Pattern



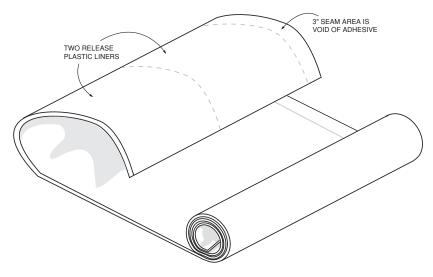
The above are general guide lines for insulation attachment. Water Tight Technologies[®] is not responsible for insulation attachments that fail. Consult the insulation manufacturer for specific instructions before application of a new substrate over an existing roof deck.

LAYOUT OF *BRITE-n-EZTM* TPO MEMBRANE

BRITE-n-EZ[™] TPO (Thermoplastic Polyolefin) Membrane comes in roll thicknesses of .045" (45 mil) and .060" (60 mil). Roll surface measurements are as follows: 5' X 50', 5'X100', 10'X50', and 10'X100'. BRITE-n-EZ[™] TPO rolls may be ordered with or without a factory applied adhesive. Membrane with the factory applied adhesive is referred to as BRITE-n-EZ[™] Self Adhered.

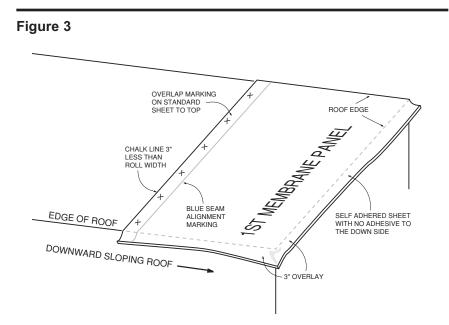
Always select roll sizes taking into account that the fewer the number of seams, the faster the job. Also you should consider the weight of the roll and ease of getting it to the roof top. You may want to consider cutting the *BRITE-n-EZ*TM *TPO Membrane* to length before taking it to the roof top. This lessens the weight per roll and makes the job of getting the membrane to the roof easier. **BRITE-n-EZTM** TPO Self Adhered Membrane has a two part plastic release liner. The area where the seam tape is applied is void of adhesive. **Figure 2** shows the plastic release liner configuration of the 10' wide $BRITE-n-EZ^{TM}$ Self Adhered Membrane roll.

Figure 2



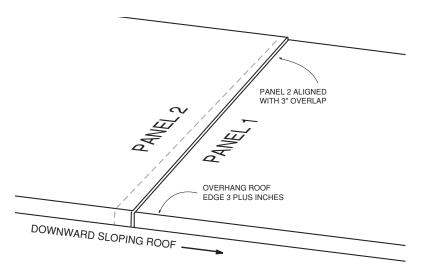
BRITE-n-EZTM TPO Membrane that will be adhered using bonding adhesive will have a "line and X" marking on one edge of the roll. This marking is a guide for contractors who do mechanically attached, heat welded systems. This marking is useful as a guide to insure at least a 3" over-lap is on *BRITE-n-EZTM* fully adhered systems. If the line marking shows after the membrane is installed it is easily removed with membrane cleaner on a cotton cloth.

Unroll the *BRITE-n-EZ*TM *TPO Membrane* over the substrate so that the sheet is at the lowest point of the roof and is wrinkle free. Care should be taken to insure the membrane overhangs the perimeter of the roof at least three (3") inches. If you are laying out *Self Adhered Membrane*, the side of the membrane over hanging the lower edge of the roof is the side that has the 3" area that is void of adhesive. On standard membrane, the over-lap marking on the top side of the sheet is always to the high side of the sloped roof. With the first starter roll it is a good idea to chalk a line up from the edge of the roof that is the width of the roll less three (3") inches. This assures that when the first roll is laid out on the chalk line it will be parallel to the edge of the roof and has the correct overhang. See **Figure 3**.



Subsequent sheets, going up the same run, should over lap the prior sheet by at least 3 inches as well. See Figure 4.





Allow the *BRITE-n-EZ*TM TPO Membrane to relax. Depending on weather conditions, this could take from fifteen (15) to thirty (30) minutes.

ADHERING FIRST MEMBRANE PANEL

BRITE-n-EZ™ TPO/EPDM Solvent Based Bonding Adhesive:

Note: This newly formulated BRITE-n-EZ[™] Solvent Based Bonding Adhesive will work to adhere BRITE-n-EZ[™] TPO Membrane to ridged board insulations without a foil facer, plywood, OSB, concrete, block or brick. This adhesive may not be used on any form of polystyrene insulation (bead board, pink or blue board) as the adhesive will soften the board surface and not provide adequate adhesion. This adhesive may also be used to adhere RUBBERALL[®] EPDM to substrates. This yellow colored adhesive comes in 1-gallon cans or 5-gallon pails. Average coverage is 60 sq. ft. of total roof area per gallon when applied to both surfaces. Coverage may vary depending on the porosity of the substrate.

Installation of membrane with *BRITE-n-EZ*[™] Solvent Based Bonding Adhesive can be done at temperatures as low as 30 degrees Fahrenheit. Keep in mind at lower temperatures the membrane is much stiffer, making it more difficult to transition from vertical to horizontal. You can make the membrane more flexible by laying it out in the sun with the black side up so that it will absorb heat. Also at lower temperatures the adhesive takes much longer to dry without causing blisters.

BRITE-n-EZ[™] Solvent Based Bonding Adhesive is to be used only for bonding BRITE-n-EZ[™] Membrane and Flashing to underlying roof surfaces, i.e. decking or insulation, walls, penetrations, etc. BRITE-n-EZ[™] Solvent Based Bonding Adhesive is not to be used for field seaming of BRITE-n-EZ[™] Membrane or Flashing. The application of this adhesive should be as follows: Take hold of the membrane at the edge of the roof and fold the sheet onto itself so that one-half (1/2) of the sheet is exposed. Take care to avoid wrinkles. It is a good idea to use duct tape to insure membrane does not move from the chalk line marking on the deck at the upper edge of the sheet. See Figure 5. Follow proper safety procedures when working near the edge of the roof.

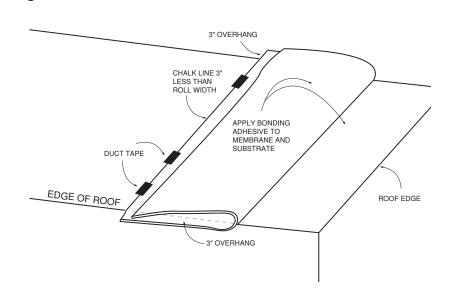
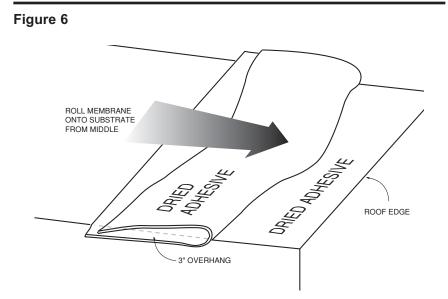


Figure 5

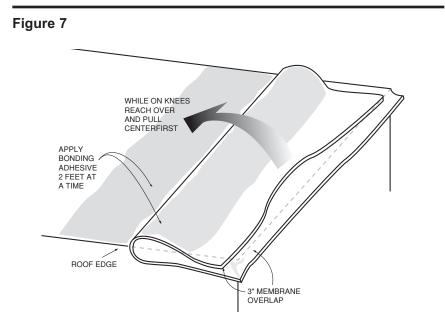
Open and thoroughly stir the *BRITE-n-EZ™ TPO Solvent Based Bonding Adhesive* (available in either 1 or 5 gallon containers). Using a solvent accepting paint roller, apply the bonding adhesive to the substrate and the EPDM sheet at a rate of sixty (60) square feet per gallon. The adhesive must be applied to 100% of <u>both surfaces</u> in an even coat without globs or puddles. Allow the adhesive to dry to the finger touch of tacky but not stringy. **If membrane is adhered to the substrate before the adhesive has dried, blisters will form under the membrane.** If smaller blisters appear, they will normally disappear after a few days without causing the membrane to loosen from the substrate over time.

Fluff air under the sheet and push the sheet onto the glued substrate in the direction of the edge of the roof. It is important to roll from the middle of the sheet first, followed by the ends (shown in Figure 6). DO NOT let the ends of the sheet roll ahead of the middle. This will cause wrinkles.



With a stiff broom, broom the fully adhered portion of the sheet to insure 100% adhesion with the substrate. Because TPO is much stiffer than EPDM, roll the entire sheet with a steel linoleum roller that is weighted to 50 pounds per square inch.

Remove the duct tape from the upper half of the membrane panel. Fold back the remaining unglued portion of the sheet in the direction of the roofs edge. Always follow proper safety procedures to avoid a fall from the roof top. Because you are working at the roofs edge, and you do not want to walk in adhesive applied to the substrate, you will have to adhere a few feet of membrane and substrate at a time. Apply bonding adhesive to two feet of the unglued sheet and substrate. **See Figure 7.** Wait for adhesive on the substrate and the adhesive on the sheet to dry so that they are tacky and but not stringy. Starting in the middle of the sheet, reach over the glued substrate and pull the sheet toward you so that the two surfaces make contact in the area of the first two feet. Apply adhesive to the remaining portion of the sheet and substrate and when the adhesive has dried mate remainder of the two surfaces. Broom and roll the entire sheet to insure 100% contact of membrane with substrate.



BRITE-n-EZ™ TPO/EPDM Water Based Bonding Adhesive:

Note: *BRITE-n-EZ*[™] *TPO/EPDM Water Based Bonding Adhesive* is environmentally friendly with low VOC's. This adhesive may be used on vertical and horizontal surfaces to adhere *BRITE-n-EZ*[™] *TPO Membrane* to foam insulation with black fiberglass facer, polystyrene insulation, high density wood fiberboard, plywood, OSB, concrete, block or brick. Because *BRITE-n-EZ*[™] *TPO* is much stiffer than RUBBERALL[®] EPDM and tends to bridge low spots on the roof surface, *BRITE-n-EZ*[™] *Water Based Bonding Adhesive* must be applied to both the substrates surface and the TPO membrane surface. Apply the adhesive with a medium nap paint roller and allow the adhesive to dry until it is tacky (not wet) before mating the two surfaces.

BRITE-n-EZ[™] Water Based Bonding Adhesive is to be used only for bonding RUBBERALL[®] Membrane and Flashing to underlying roof surfaces, i.e. decking or insulation, walls, penetrations, etc. BRITE-n-EZ[™] Water Based Bonding Adhesive is <u>not</u> to be used for field seaming of BRITE-n-EZ[™] Membrane or Flashing.

Caution: Apply adhesive at temperatures of 40 degrees F (4 degrees C) and rising with no chance of freezing in the next 48 hr.

BRITE-n-EZ[™] Water Based Bonding Adhesive comes in 1 gallon and 5 gallon containers.

Fold the membrane back from the roofs edge so that half of the sheet is exposed as shown in **Figure 5**. Apply 5-6 mils of adhesive to both the membrane and the substrate using a medium nap paint roller. Coverage rate is approximately 120 sq. ft. / gallon but may vary depending job site conditions. Remove any bonding adhesive that is accidentally applied in the seam area with a damp cloth. Allow adhesive to dry to a transparent appearance and is dry to a finger touch.

Fluff air under the sheet and push the sheet onto the glued substrate in the direction of the edge of the roof. It is important to roll from the middle of the sheet first, followed by the ends (shown in Figure 6). DO NOT let the ends of the sheet roll ahead of the middle. This will cause wrinkles. With a stiff broom, broom the fully adhered portion of the sheet to the substrate to insure 100% adhesion. Because TPO is much stiffer than EPDM, roll the entire sheet with a steel linoleum roller that is weighted to 50 pounds per square inch.

Remove the duct tape from the upper half of the membrane panel. Fold back the remaining unglued portion of the sheet in the direction of the roofs edge. Always follow proper safety procedures to avoid a fall from the roof top. Because you are working at the roofs edge, and you do not want to walk in adhesive applied to the substrate, you will have to adhere a few feet of membrane and substrate at a time. Apply water based bonding adhesive to two feet of the unglued sheet and substrate. See Figure 7. Wait for adhesive on the substrate and the adhesive on the sheet to dry so that they are tacky and but not stringy. Starting in the middle of the sheet, reach over the glued substrate and pull the sheet toward you so that the two surfaces make contact in the area of the first two feet. Apply adhesive to the remaining portion of the sheet and substrate and when the adhesive has dried mate remainder of the two surfaces. Broom and roll the entire sheet to insure 100% contact of membrane with substrate.

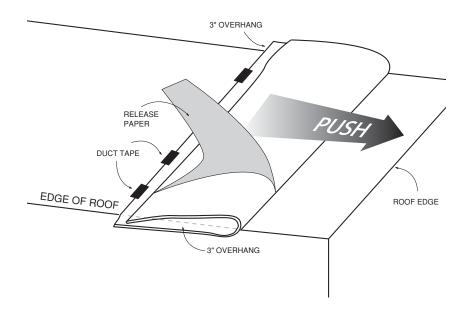
BRITE-n-EZ™ Self Adhered TPO Membrane:

Note: *BRITE-n-EZ*[™] Self Adhered Membrane may not be installed below 50 degrees Fahrenheit. When near this tempera-

ture rolls should remain in a warm environment until ready for installation. One can make the membrane more flexible and cause the adhesive to warm-up by laying the membrane on the roof top with the black side exposed to the bright sun for a short period of time.

Figure 2 shows *BRITE-n-EZ[™] TPO Self Adhered Membrane* release plastic liner configuration. Fold the membrane back so that the lower half of the sheet and plastic release liner are visible. See **Figure 8**. The side of the plastic release liner that is in contact with the adhesive has a film that allows for easy release. The other side of the release liner is not treated. <u>On windy days take care so that the top of the release liner does come in contact with the adhesive.</u>

Figure 8



Remove the plastic release liner from the lower half of the sheet. Fluff air under the sheet and push the sheet onto the substrate in the direction of the edge of the roof. It is important to roll from the middle of the sheet first, followed by the ends (shown in Figure 6). <u>DO NOT let the ends of the sheet roll ahead of the middle. This</u> will cause wrinkles.

Remove the duct tape from the upper half of the membrane panel. Fold the sheet back toward the edge of the roof to expose the plastic release liner that remains on the sheet. Remove the plastic release liner. While facing the roll and roof edge, kneel and starting in the middle pull the sheet toward you in the same manner as shown in **Figure 7** above.

Broom the entire sheet with a push broom working from the center of the sheet out to edges. Because TPO is much stiffer than EPDM, roll the entire sheet with a steel linoleum roller that is weighted to 50 pounds per square inch.

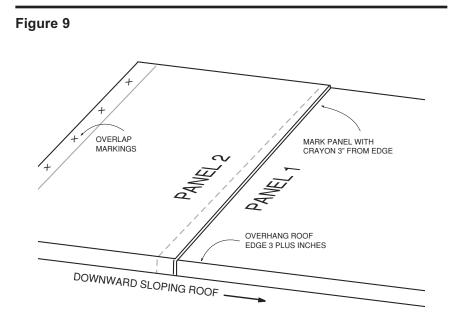
SEAMING AND ADHERING SUBSEQUENT MEMBRANE PANELS

Standard Membrane:

BRITE-n-EZ[™] TPO Membrane (both 45 mil and 60 mil) is much stiffer than EPDM membranes that many contractors are familiar with. For that reason it is simpler and improves productivity if the seaming process is completed in conjunction with the process of adhering the membrane.

With the first membrane panel adhered on the lowest point of roof, subsequent rolls are set in place going up the slope with a minimum of 3" overlap. It is useful to have a water soluble roofing crayon to place several marks on the top side of first sheet installed measuring down 3" from the edge as shown in **Figure 9**. This will be a guide to position future rolls thus insuring proper seam overlap.

When using standard *BRITE-n-EZTM TPO Membrane*, you should set a subsequent membrane panel in place along the marks on the top side of the lower sheet already installed. Insure the factory applied overlap markings shown in *Figure 9* are to the top side of the roll. Align the roll with the 3 inch overlap markings that you made on the prior sheet.



Pull the membrane back from the top side taking care that the membrane does not move from the marks on the prior sheet. Duct tape is useful to keep the sheet from sliding. See **Figure 10**.

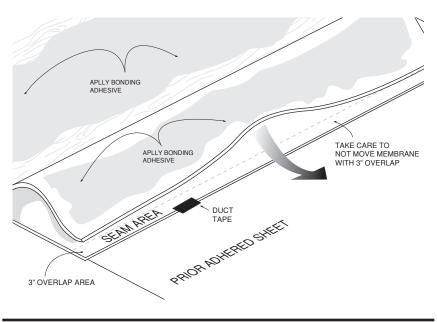


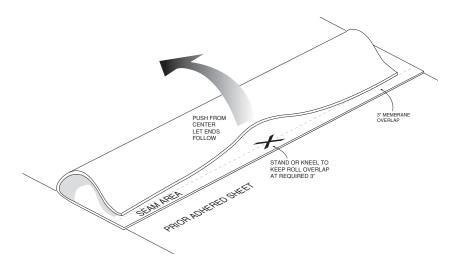
Figure 10

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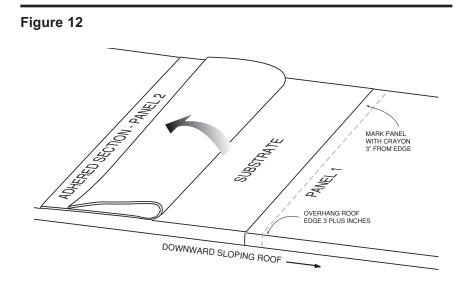
Following "adhering membrane" instructions noted in the section above, apply BRITE-n- EZ^{TM} Solvent or Water Based Bonding Adhesive to substrate and membrane area shown in **Figure 10**. Allow the adhesive to dry to a finger touch that is tacky by not stringy.

The next step is critical to insure proper seam overlap. From the middle of the sheet with bonding adhesive applied, raise the sheet. See Figure 11. While standing or kneeling on the bottom half of the second sheet to insure it does not move from the overlap marks, slowly push the membrane onto the substrate. Broom and roll membrane panel to insure solid contact between membrane and substrate.

Figure 11

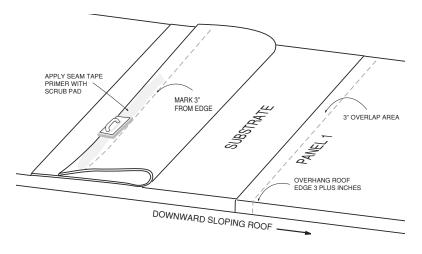


Lay second panel back in opposite direction to expose the other half of the roll on standard membrane. See **Figure 12**.



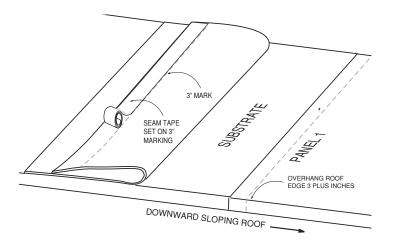
Mark the back side of the upper sheet 3" in from the edge as a guide for setting the seam tape. With a $BRITE-n-EZ^{TM}$ Scrub Pad apply $BRITE-n-EZ^{TM}$ Tape Prime from the edge of the sheet in to the 3" mark using a back and forth motion. Let the primer dry. See **Figure 13**.



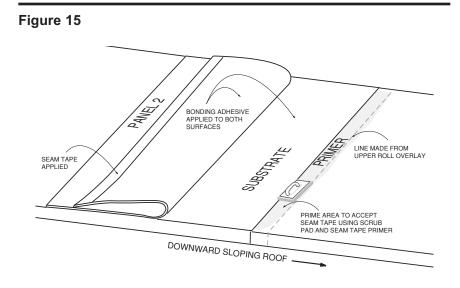


BRITE-n-EZ[™] Seam Tape comes in rolls of 3" x 25' and 3" x 100'. Partially unroll a roll of seam tape and set the tape on the back side of the upper panel with the backing paper aligned with the 3" marks on the back side of membrane. See **Figure 14**. It is important that you see seam tape exposed beyond the end of the membrane panel. Check this tape exposure frequently. With your hand, rub the tape to insure good contact with the membrane. Do not remove seam tape backing paper at this time.

Figure 14

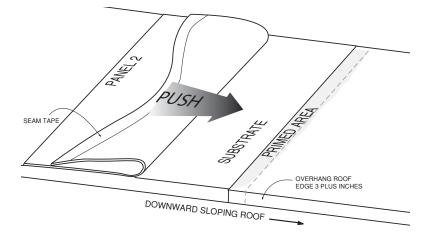


Apply either *BRITE-n-EZ*[™] Solvent or Water Based adhesive as noted in the section above. Adhesive must be applied to the substrate and the membrane. See **Figure 15**. Take care not to get bonding adhesive in the seam area of the sheet already installed. While the bonding adhesive is drying, apply *BRITE-n-EZ*[™] *Tape Primer* to the 3" overlap area on the sheet already installed as shown in **Figure 15** using a *BRITE-n-EZ*[™] *Scrub Pad.* Take care not to walk in the seam area just primed.



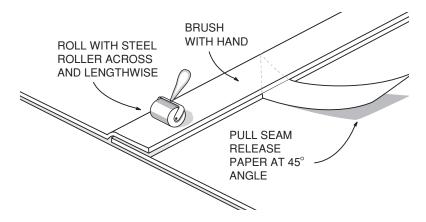
Wait for the seam tape primer and adhesive to dry as noted earlier. From the middle of the upper sheet push it in the direction of the sheet already installed. See **Figure 16**. When it flops into place, broom the membrane to insure initial contact of membrane and substrate.



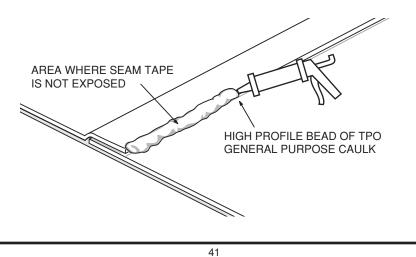


With the membrane firmly attached, raise the edge of the membrane and pull the seam release paper liner from the seam area. See **Figure 17**. Always pull the seam release paper at a 45 degree angle while brushing the seam with your hand to insure even contact with seam area of lower sheet. With firm pressure roll the seam area with a *BRITE-n-EZ*TM *Steel Roller* traveling lengthwise and then across the seam.

Figure 17



Roll the entire sheet with a steel linoleum roller that is weighted to 50 pounds per square inch. Check the seam to insure the tape is exposed the entire length. If there are areas where you cannot see the tape, apply a high profile bead of BRITE-n- EZ^{TM} TPO General Purpose Caulk. See Figure 18.



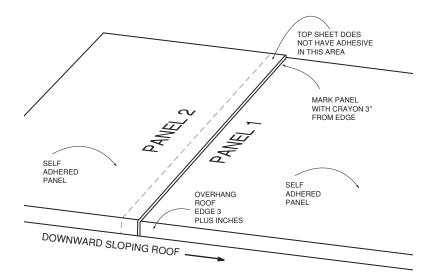
SEAMING AND ADHERING SUBSEQUENT MEMBRANE PANELS

Self Adhered Membrane:

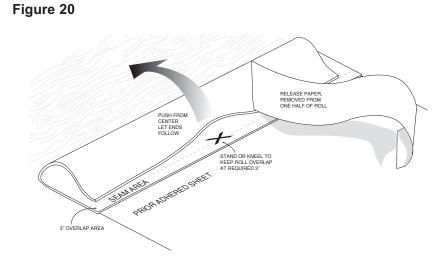
Installation of *Self Adhered TPO Membrane* is very much the same as standard membrane discussed above.

When using BRITE-n- EZ^{TM} Self Adhered Membrane, set the roll in place as shown in **Figure 19**. Be certain the edge of roll without preapplied adhesive over laps the prior roll. This area void of adhesive will accept seam tape in a later step.

Figure 19



Pull the sheet back from the top side exposing one half of the sheet and the plastic release liner. See **Figure 20**. Pull the release paper from this half of the sheet while taking care not to let the top side of the plastic release liner contact the adhesive. **Raise the sheet from the middle. While standing or kneeling on the bottom half of the second roll to insure it does not move from the overlap marks, slowly roll the membrane onto the substrate.** See **Figure 20**.

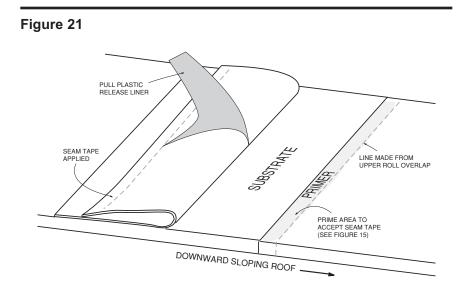


Broom the sheet to establish initial contact of adhesive with substrate. Pull the membrane back in the opposite direction to expose the plastic release liner and the seaming area of the roll that is void of adhesive.

Mark the back side of the upper sheet 3" in from the edge as a guide for setting the seam tape. With a $BRITE-n-EZ^{TM}$ Scrub Pad apply $BRITE-n-EZ^{TM}$ Tape Primer from the edge of the sheet in to the 3" mark using a back and forth motion. Let the primer dry. See **Figure 13**.

BRITE-n-EZ[™] Seam Tape comes in rolls of 3" x 25' and 3" x 100'. Partially unroll a roll of seam tape and set the tape on the back side of the upper panel with the backing paper aligned with the 3" marks on the back side of membrane. See **Figure 14**. It is important that you see seam tape exposed beyond the end of the membrane panel. Check this tape exposure frequently. With your hand, rub the tape to insure good contact with the membrane. Do not remove seam tape backing paper at this time.

Using *BRITE-n-EZ*[™] *Tape Primer* and *Scrub Pad*, prime the area of the first sheet shown in **Figure 21**. After the primer has dried pull the plastic release liner from the sheet and push in the direction of the first sheet installed to initiate contact with the substrate. Pull the seam tape release liner as discussed above and shown in **Figure 17**.



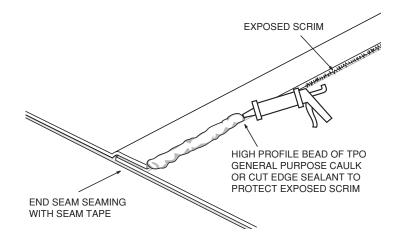
Roll the entire sheet with a steel linoleum roller that is weighted to 50 pounds per square inch. Check the seam to insure the tape is exposed the entire length. If there are areas where you cannot see the tape, apply a high profile bead of BRITE-n- EZ^{TM} TPO General Purpose Caulk. See Figure 18.

END SEAM SEAMING OF PANELS IN THE SAME RUN

Standard Membrane:

When a single run of *BRITE-n-EZ*TM *TPO* standard membrane requires more than one panel, the panels should over lap at least 3". Once the membrane is in position but before the membrane is adhered, as noted above, lay the end of the sheet back to expose the underside. Chalk a line 3" in from the end of the sheet. Apply tape primer and apply seam tape as discussed above but do not remove the seam tape release paper at this time. Proceed with adhering the substrate and seaming the side laps as discussed above. The side lap seam tape should overlap the end lap seam tap by at least two inches. With the field of the sheet and the side seams complete, pull back the end lap seam flap and apply *BRITE-n-EZ*TM Tape Primer with a Scrub Pad. Hold the flap back to allow the Seam Tape Primer to completely dry. Do not trap solvent under the flap as it will cause a blister. Pull the seam tape release liner at a 45 degree angle as discussed above and roll with a steel hand roller. Since the end of the roll has exposed scrim, the entire length of the end seam should be caulked with BRITE-n-EZTM TPO General Purpose Caulk or Cut Edge Sealant. See Figure 22a.

Figure 22a

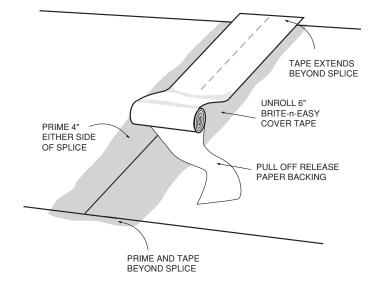


Self Adhered Membrane:

When a single run of *BRITE-n-EZTM TPO Self Adhered Membrane* requires more than one panel, the ends of the two panels should be butted together. After the field of the sheet has been adhered and the side seams complete a *BRITE-n-EZTM Cover Tape* will be applied to the butt joint at the meeting of two rolls in the same run.

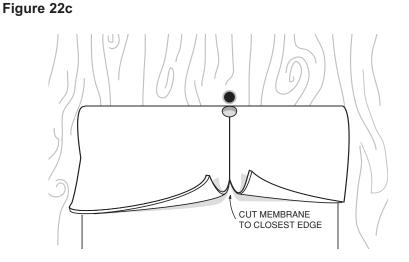
Surfaces must be primed with *BRITE-n-EZ*[™] *Tape Primer* at least 4" either side of the butt splice and 4" beyond the end of the splice. Peel back the *Cover Tape* backing paper and set the end of the tape at least 3" beyond the splice and equidistant on either side of the meeting of the two sheets. See **Figure 22b**. Once the *Cover Tape* is in place it must be rolled with a steel hand roller.





PIPE PENETRATIONS

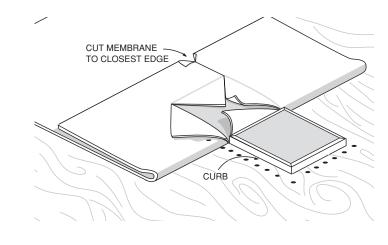
When laying out the field sheets and a pipe is encountered (as in **Figure 22c**), roll the membrane up to the pipe. Be sure to maintain the proper alignment of the sheet with the roof edge, wall, and overlap for the prior panel. Make a straight cut from the pipe to the nearest edge of the field sheet. Cut a hole to match the diameter of the pipe and roll the field sheet around the pipe. Check the final position of the sheet, making certain the membrane does not bridge up the pipe. If using a self-adhered sheet, do not remove the plastic release liner until you are ready to adhere the sheet.



OTHER PROTRUSIONS IN ROOF

When laying out the field sheet and a curb (chimney, skylight, etc.) is encountered, unroll the folded membrane up to the curb while maintaining proper sheet alignment with walls, perimeter edges and other protrusions. **See Figure 23**. When using self-adhered membrane, do not remove the plastic release liner at this time.





Measure the width and depth of the unit and transfer the corresponding dimensions onto the folded membrane. Draw an X inside the box. Cut the X mark and from one corner cut a straight line to the nearest edge of the membrane. Roll the membrane around the unit, leaving a triangle of membrane turning up all four (4) sides. Press the triangle of membrane firmly into the transition from the deck to the vertical wall.

After all cuts are made and the membrane has been correctly positioned, force the membrane tightly into the transition from horizontal to vertical surfaces creating a crease in the membrane. When using self-adhered membrane, fold the membrane back and lightly score the plastic release liner on the lines formed by the creases. This will allow the release liner to be removed from the field of the sheet in the bonding process without the flaps adhering to the vertical wall until ready.

Begin adhering the *BRITE-n-EZ*[™] *TPO Membrane* as noted in earlier sections. After the field membrane is adhered, apply bonding adhesive to the vertical walls and membrane triangle then bond the triangles up the sides of the unit (chimney, skylight, etc.). With self-adhered membrane, remove the release liner from the membrane triangle then bond the triangles up the sides of the unit (chimney, skylight, etc.). You should take care to first bond the membrane into the angle change from deck to wall so that the membrane is completely adhered at this critical point. Membrane should travel up the wall at least twelve inches (12") or to the top of the opening if it is less than twelve (12") inches as shown in **Figure 24**.

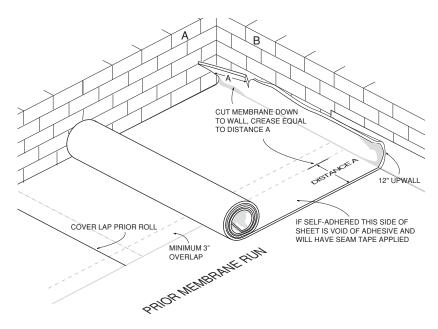
POSITIONING MEMBRANE FOR INSIDE CORNER

Since this membrane is reinforced and may have a pre-applied adhesive backing, laying out the membrane for this detail is challenging but with a little practice it becomes routine. The following layout and cutting is done without removing the plastic release liner if applicable.

Starting at the inside corner, extend the roll up wall B in **Figure 24** at least 12". Unroll the *BRITE-n-EZ™ TPO Membrane* along the parallel parapet wall (A) in **Figure 24**. Note: If using self adhered mem-

brane the side of the sheet that will overlap the prior roll should be the side with no adhesive.

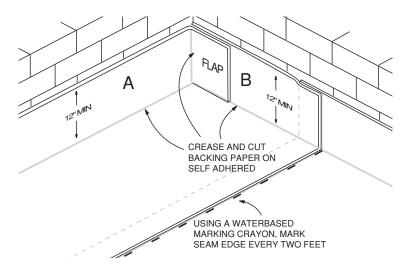
Figure 24



If this is a continuation of a run, you must be certain the end of the roll overlaps or butts the adjoining roll (see End of Roll Seaming section above) and overlaps any roll lower on the sloping roof by at least 3". Cut the roll to length. Press the sheet firmly into the angle change at the base of wall (B) in **Figure 24** thus creating a noticeable crease. Measure the distance from the lower edge of the roll up to the prior roll and subtract three inches (3") for the overlap (this is distance A in the figure). At the upper end of the roll where it is creased measure down a distance equal to A and cut the membrane from the crease up the 12 inches on wall B. This will create a flap from wall A to wall B when the roll is in final position.

Now you can slide the membrane into position being certain to **over**lap prior rolls at least 3 inches. As shown in Figure 25, the membrane will travel up wall A and B the required 12". If membrane going up wall A does not travel up the wall the required 12" an additional piece must be added to flash in wall A. This added flashing will be covered in the Wall Termination section. Note a membrane flap from wall A to wall B is created in the cutting and folding process. It will overlap the membrane on wall B as shown in **Figure 25**. Using a water based marking crayon, mark seam edge every few feet. This will be the indicator line for applying tape primer and for repositioning the membrane with a 3" overlap.

Figure 25



When using self adhered membrane, press the membrane firmly into the transition from substrate to vertical wall creating a noticeable crease on wall A and Wall B. Also make a crease for the flap from wall A membrane to wall B. Slide the roll away from the wall and turn the sheet upside down. With a utility knife, carefully cut the plastic release liner along creases made at wall A and B and the flap. <u>Take care to cut the plastic release liner without cutting the membrane</u>. This will allow the plastic release liner to be removed from the field of the sheet while leaving the plastic release liner in place on the membrane going up wall A and B until the remainder of the sheet is adhered.

On both self adhered and standard sheet, flip the sheet upside down. Using a water based marking crayon, mark a line 3" in from the seam edge of the membrane for positioning the seam tape. Mark this line every few feet along the seam edge as discussed in the seaming section earlier. With the self adhered sheet the seam tape will set where the sheet is void of the pre-applied adhesive.

Apply tape primer to the seam area using a *BRITE-n-EZ*[™] *Scrub Pad*. Position *BRITE-n-EZ*[™] *Seam Tape* backing paper along the

marked lines and set the seam tape into place. With your hand or *BRITE-n-EZ*[™] Steel Roller, firmly set the tape in place along its entire length. Be certain the seam tape extends ¼ inch beyond membrane edge. Make certain you apply tape to the membrane that will go up wall B.

Using a *BRITE-n-EZTM Scrub Pad* apply tape primer to the seam area of prior sheet slightly beyond the marks made on the top of the sheet. Flip the membrane over so the white side is up and set the membrane in place with 3" overlap indicator previously marked. Reach under the membrane and pull the seam tape release liner at a 45 degree angle from the seam tape making certain the sheet stays in place against the wall and is properly aligned for the 3" overlap. Do not set the seam tape in place on vertical wall B at this time. Roll the seam area with a *BRITE-n-EZTM Steel Roller*. With the taped section of the membrane secured in position to the deck section of the prior sheet, pull the membrane back to expose the underside.

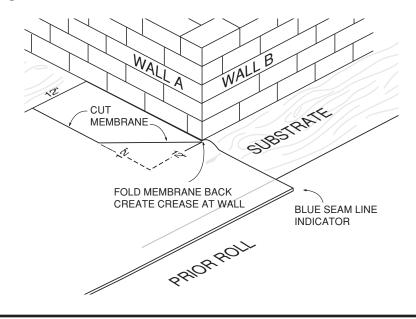
Standard sheet: Apply either solvent based or water based bonding adhesive to the substrate and the back side of the membrane up to the crease as discussed in an earlier section. Let the adhesive dry to a finger touch. Starting at the middle of the sheets length, roll the membrane onto the substrate taking care not to create a wrinkle. Broom the sheet to insure contact with the substrate. With the sheet attached to the substrate, pull the membrane back and apply *BRITE-n-EZ*TM *Bonding Adhesive* to the vertical wall and the back side of the sheet for wall B. After the adhesive has dried, start at the center base of the sheet and firmly press the membrane into the transition from substrate to wall B. With your hands, firmly contact the membrane with the wall. Do the same on wall A. Since the flap will be covered with flashing membrane, it is ok to use bonding adhesive to keep the flap in position until it is flashed in.

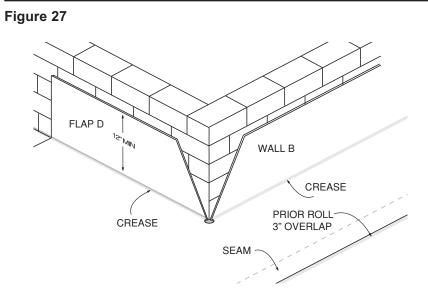
Self Adhered sheet: While the membrane is lying upside down with the seam tape securely attached to the prior sheet, remove the plastic release liner from the back of the sheet that will contact the substrate. Remember you slit the release liner at the crease earlier. Take care to not remove the release liner from the membrane that will go up wall A or B. Starting at the middle of the sheets length, roll the membrane onto the substrate taking care not to create a wrinkle. Broom the sheet to insure contact with the substrate. With the sheet attached to the substrate, pull the membrane back and remove the plastic backing paper on the membrane that will travel up wall B.

Starting at the center base of the sheet, firmly press the membrane into the transition from substrate to wall B. With your hands, firmly contact the membrane with the wall. Do the same on wall A. Pull the release paper from the flap and force it into the corner and then adhere it to wall B. Finally, you should broom or hand-rub the flashings to ensure 100% adhesion. You are now ready to flash the inside corner.

POSITIONING MEMBRANE FOR OUTSIDE CORNER

When an outside corner is encountered when laying out a roof panel, the following procedure is suggested. Keeping the roll of membrane aligned with a proper 3" overlap of the prior sheet coming up the roof and any sheets in the same run. Unroll the *BRITE-n-EZ*TM *TPO Membrane* up to the outside corner and fold the membrane back onto itself. Create a crease at the base of wall A and cut the membrane as shown in Figure 26 to create a flap that will go up wall A. Fold the membrane at the cut and continue to lay out the sheet out along wall B. While insuring a 3" overlap with prior roll, force the membrane into the transition from the deck to wall B creating a noticeable crease as shown in **Figure 27**.





Mark the prior sheet at the 3" overlap as a guide for applying tape primer and positioning membrane. Lay the sheet of BRITE-n- EZ^{TM} *TPO Membrane* to be adhered on its back and apply tape primer and seam tape as noted in seaming section above. Using a BRITE-n- EZ^{TM} Scrub Pad apply TPO Tape Primer to the seam area of prior sheet slightly beyond the marks made on the top of the sheet. Now, set the sheet in place so that it is positioned against the wall and has the require 3" overlap with the prior sheet.

Reach under the membrane and pull the seam tape release liner at a 45 degree angle from the seam tape making certain the sheet stays in place against the wall and is properly aligned for the 3" overlap. Roll the seam area with a *BRITE-n-EZ*TM *Steel Roller*. With the taped section of the membrane secured in position to the deck section of the prior sheet, pull the membrane back to expose the underside.

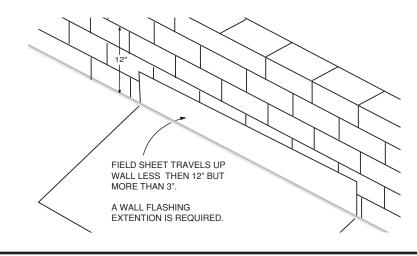
Standard sheet: As discussed in an earlier section, apply either solvent base or water based bonding adhesive to the substrate and the back side of the membrane up to the crease along wall B and out from wall A the same distance from the seam as was done on wall B. Let the adhesive dry to a finger touch. Starting at the middle of the sheets length, roll the membrane onto the substrate up to the transition with Wall B taking care not to create a wrinkle. Broom the sheet to insure contact with the substrate. Apply bonding adhesive and adhere the remainder of the sheet out from wall A. With the sheet attached to the substrate, pull the membrane back and apply *BRITE*-

 $n-EZ^{TM}$ Bonding Adhesive to the vertical wall and the back side of the sheet for wall A and B. After the adhesive has dried, start at the center base of the sheet and firmly press the membrane into the transition from substrate to wall. With your hands, firmly contact the membrane with the wall. You are now ready to flash the outside corner.

Self Adhered Sheet: With the seam tape attached to the prior sheet, pull the membrane back and remove the backing paper from the field of the sheet up to the crease going up wall A and wall B. Do not remove the backing paper that will travel up the vertical walls. Starting in the middle of the sheet, roll the membrane onto the substrate. Broom and then roll the field of the sheet with a linoleum roller. Once the field of the sheet is adhered, pull the release paper from the membrane traveling up walls A and B and firmly press the membrane onto the vertical wall. Always start adhering to the vertical wall from the center of the sheet to avoid wrinkles.

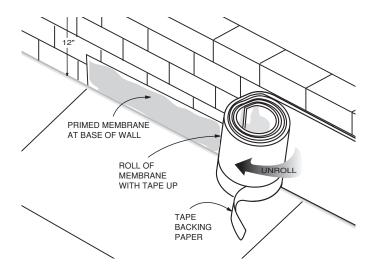
WALL FLASHING EXTENSION

When a field membrane does not transition up the wall the required 12" (See Figure 28) a flashing extension is required. Either of two products can be used as a flashing extension: $BRITE-n-EZ^{TM}$ Detailing Membrane or $BRITE-n-EZ^{TM}$ TPO Membrane.



When the field membrane travels up the wall at least 3": Cut a strip of BRITE-n- EZ^{TM} TPO Membrane that is more than 12" wide from a standard roll of membrane or use BRITE-n- EZ^{TM} Detailing Membrane which is 24" wide. Unroll the membrane on the deck, turn it over exposing the back side and mark the membrane at several spots along its length, each mark being 3" up from the bottom. Apply tape primer and seam tape to the back side edge along the marked lines following the seaming procedure noted earlier. Do not remove the backing paper from the tape at this time. Roll the flashing membrane in a roll. Using a BRITE-n- EZ^{TM} Scrub Pad apply TPO Tape Primer to the bottom three inches of deck membrane that is traveling up the wall. See Figure 29.

Figure 29

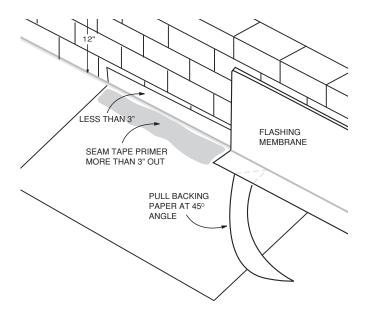


Set the roll of flashing membrane against the wall and remove tape backing paper as the flashing membrane is unrolled. Using a Steel Hand Roller roll the tape to insure good contact with the field membrane that is traveling up the wall. Lay the flashing membrane back and apply BRITE-n- EZ^{TM} Solvent or Water Based Adhesive to the membrane and the wall. Allow the adhesive to dry and adhere flashing as discuss in an earlier section.

When the field membrane does not travels up the wall at least **3**": Cut a strip of *BRITE-n-EZ*TM *TPO Membrane* that is more than 12" wide from a standard roll of membrane or use *BRITE-n-EZ*TM *Detailing Membrane* which is 24" wide. Unroll the membrane on the deck, turn it over and mark the membrane at several spots along its

length, each mark being 3" up from the bottom. Apply tape primer and seam tape to the bottom edge of the flashing membrane along the marked lines following the seaming procedure noted earlier. Do not remove the backing paper from the tape at this time. Apply *Seam Tape Primer* to the deck membrane out at least 3" from the vertical wall. Set the flashing membrane against the wall with the seam tape on the deck. Force edge of the tape firmly up to the transition with the wall and remove the seam tape backing paper while pulling at a 45 degree angle. See **Figure 30**. Using a *BRITE-n-EZ*TM *Steel Hand Roller*, roll the tape to insure good contact of the tape with the deck membrane. Lay the flashing membrane back and apply *BRITE-n-EZ*TM *Solvent* or *Water Based Adhesive to* the membrane and the wall. Allow the adhesive to dry and adhere flashing as discuss in an earlier section.

Figure 30



INSIDE CORNER FLASHING DETAIL

In an earlier section of this manual a flap was created when an inside corner was flashed up the wall. TPO materials cannot be stretched or shaped for an inside corner. The inside corner will be flashed with BRITE-n- EZ^{TM} Uncured Black Flashing With Tape. This

flashing material is black EPDM that can be formed into most any shape. Over time it will cure as an elastomeric membrane. Because it is black in color it will be coated with $BRITE-n-EZ^{TM}$ Styrene/Acrylic White Coating.

Thoroughly mix *BRITE-n-EZ[™] TPO Tape Primer* a minimum of 2 minutes with vigorous hand mixing using a wooden paint stirrer or its equivalent is required. All sources of ignition should be eliminated; adequate ventilation should exist. DO NOT THIN!

If there is dirt or contamination on the membrane, clean the surfaces with a clean cotton rag saturated with BRITE-n- EZ^{TM} Membrane Cleaner removing excess contamination prior to application of the primer.

Using a *BRITE-n-EZTM Scrub Pad* and *BRITE-n-EZTM TPO Tape Primer*, prime the membrane on the wall and the field of the roof that will be covered by the *BRITE-n-EZTM* flashing.

From a 12" x 25' roll of *BRITE-n-EZ*TM Uncured Black Flashing With Tape cut a piece of flashing 12" x 18" and round the corners. Fold the flashing at the 6" mark from one end cut the plastic release liner and remove it from the first 12" of the flashing (see **Figure 31a**).

Figure 31a

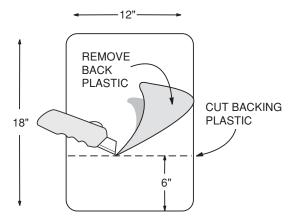


Figure 31b

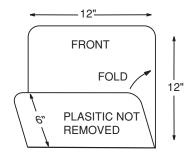
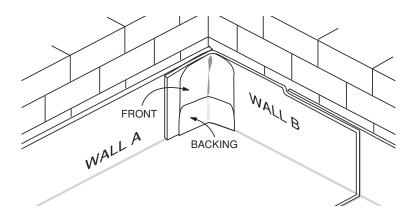
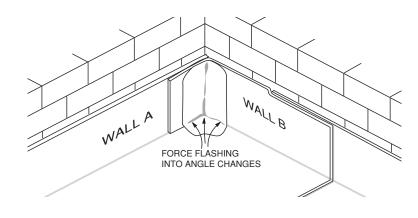
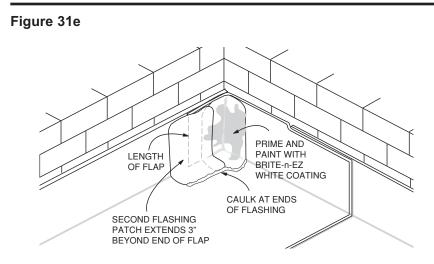


Figure 31c









Fold the 6" piece of flashing with plastic release liner intact so that membrane faces itself (**Figure 31b**). Now fold the flashing in half vertically with membrane facing membrane and carefully set the flashing into the corner and adhere to one wall then the other. See **Figure 31c**. Remove the protective plastic release liner from the 6 inch section of flashing. Starting in the corner, work the flashing onto the roofing surface evenly (**Figure 31d**).

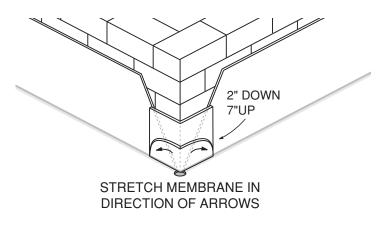
Continue to flash wall A with *BRITE-n-EZTM* Uncured Black Flashing With Tape until the wall is flashed 3" beyond the vertical flap. Always prime the wall, the roof and the prior flashing that was installed with *BRITE-n-EZTM* TPO Tape Primer. Cut a second strip of *BRITE-n-EZTM* Flashing 12" x 18". Overlap the prior flashing 3" and adhere to the wall and roof (see **Figure 31e**). Force the flashing into the transition from roof to wall to insure no water can run behind the flashing and into the corner. With the flashing installed, roll with a *BRITE-n-EZTM* Steel Hand Roller to insure good adhesion of the flashing material.

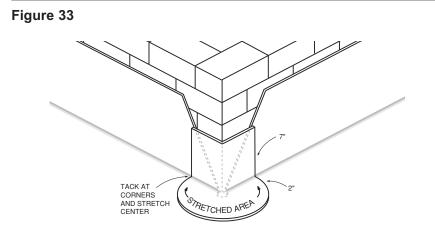
The *BRITE-n-EZ*TM *Flashing* is, on its weathering surface, made of uncured black EPDM rubber membrane. For esthetics, coat this flashing with *BRITE-n-EZ*TM *Styrene/Acrylic White Coating*. First using a *BRITE-n-EZ*TM *Scrub Pad*, apply *BRITE-n-EZ*TM *Coating Primer* to the surface of the flashing patch. Follow instructions for stirring primer noted on the can. This is an adhesion enhancing step that must be done to provide a suitable surface for the coating to bond to the EPDM. After the primer has dried, caulk the end cuts of the flashing where tape does not extend beyond the flashing patch

with *BRITE-n-EZ*[™] General Purpose Caulk. Allow the caulk to partially dry (skim over). Later in the day, apply *BRITE-n-EZ*[™] *Styrene/Acrylic White Coating* to the black surface of the flashing. To achieve adequate hide of the black membrane, a second application of the white coating will be required after the first has dried.

OUTSIDE CORNER FLASHING DETAIL

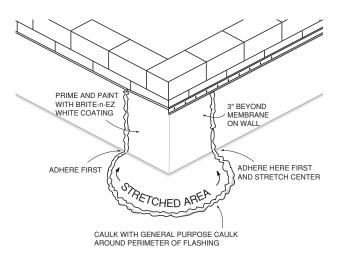
Prior to installing *BRITE-n-EZ™* Uncured Black Flashing With Tape on an outside corner, apply BRITE-n-EZ™ TPO Tape Primer to the wall and deck membrane with a BRITE-n-EZ[™] Scrub Pad. Cut a piece of BRITE-n-EZ[™] flashing material six inches (6") wide by nine inches (9") long. You should always round the corners to prevent inadvertent peeling. After the primer has dried, remove the backing material and fold one end of the flashing back onto itself on the nontape side two inches (2") from the end. Place the membrane against the vertical surface so that half the flashing is on either side of the corner. Fold the flashing around the corner and adhere to the vertical surface as shown in Figure 32. With the flashing adhered to the vertical wall, stretch the flashing onto the roof by first adhering the corner and then working the material out and away from the corner. See Figures 32 and 33. The flashing should extend two inches (2") onto the roof deck, and seven inches (7") up the vertical as shown in Figure 33.





Prime the flashing material which was just adhered with *BRITE-n-EZ*TM *TPO Tape Primer* using a *BRITE-n-EZ*TM *Scrub Pad*. Cut and apply additional pieces of *BRITE-n-EZ*TM *Uncured Black Flashing With Tape* to the wall and roof to extend the flashing at least 3" beyond the membrane on the wall and roof as shown in **Figure 34**.

Figure 34



Always adhere the flashing at each corner and stretch the middle of the flashing away from corner as the flashing is mated to the field membrane. Roll the flashing with a $BRITE-n-EZ^{TM}$ Steel Hand Roller.

The BRITE-n-EZ[™] Flashing is, on its weathering surface, made of

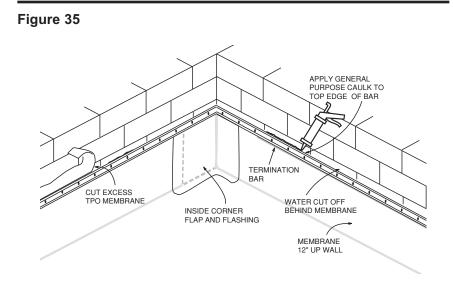
uncured black EPDM rubber membrane. For esthetics, coat this flashing with *BRITE-n-EZ*TM *Styrene/Acrylic White Coating*. First using a *BRITE-n-EZ*TM Scrub Pad, apply *BRITE-n-EZ*TM *Coating Primer* to the surface of the flashing patch. Follow instructions for stirring primer noted on the can. This is an adhesion enhancing step that must be done to provide a suitable surface for the coating to bond to the EPDM. After the primer has dried, caulk the end cuts of the flashing where tape does not extend beyond the flashing patch with *BRITE-n-EZ*TM *General Purpose Caulk*. Allow the caulk to partially dry (skim over). Later in the day, apply *BRITE-n-EZ*TM *Styrene/Acrylic White Coating* to the black surface of the flashing. To achieve adequate hide of the black membrane, a second application of the white coating will be required after the first has dried.

WALL TERMINATION

Always extend *BRITE-n-EZTM* TPO Membrane up the wall a minimum of twelve inches (12"). When using wood shakes, or other siding materials, a *BRITE-n-EZTM* Termination Bar is not required if the siding material is brought down at least eight inches (8") below the top of the membrane. All siding must be kept a minimum of four inches (4") above the roof deck.

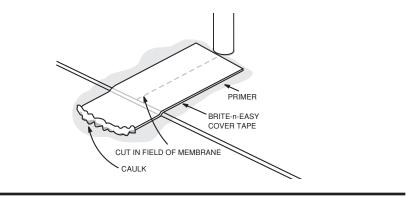
Determine the height of the finished wall flashing. 12" height is desired but less is acceptable if job conditions won't allow for full 12" including placement of the aluminum *BRITE-n-EZ*[™] *Termination Bar*. Chalk a line at this level. Peel the top of the wall flashing away from the wall down to the chalk line and apply a generous bead of BRITE-n-EZ[™] Water Cut-Off Mastic between the membrane and the wall. The mastic should be applied so that the final position of the termination bar will be directly over the water cut-off mastic.

BRITE-n-EZTM Termination Bar comes in five foot (5') and ten foot (10') lengths. Fasten the Termination Bar with nylon/metal anchor pins, or aluminum sheet metal screws. Install a fastener in every predrilled hole. Remove excess membrane that extends above the Termination Bar with a utility knife and apply **BRITE-n-EZTM** General Purpose Caulk to the top of the Bar as shown in **Figure 35**.



COVER TAPE

Where a protrusion in the roof, such as a pipe or curb opening, was encountered while installing the *BRITE-n-EZ*TM *TPO Membrane*, the membrane was cut to the nearest edge to allow easy layout of the membrane. After the field sheet has been adhered and prior to flashing the protrusion you must prime the field sheet with *BRITE-n-EZ*TM *TPO Tape Primer* and apply *BRITE-n-EZ*TM *TPO Cover Tape* over the entire cut in the field sheet. Always caulk the end of the cover tape where it was cut because the tape does not extend beyond the tapes TPO top surface. See **Figure 36**.



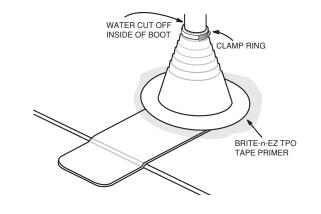
PEEL AND STICK PIPE BOOT

BRITE-n-EZ[™] TPO Pipe Boot with Tape is a multi-dimensional flashing aid fitting pipe like penetrations with diameters of 1" to 6 7/8". Slide the BRITE-n-EZ[™] TPO Pipe Boot with Tape over the pipe and select the index ring that will provide a snug fit. Cut the pipe boot at the step back above the selected index ring. DO NOT CUT DIAGO-NALLY THRU THE INDEX RING. Test fit the pipe boot. It should fit snugly over the pipe.

With the pipe boot sitting on the roof surface, measure the height of the index ring to the roof. Mark this height on the pipe and apply a generous bead of $BRITE-n-EZ^{TM}$ Water Cut-Off Mastic around the pipe just below this mark

After stirring, apply *BRITE-n-EZ*TM *TPO Tape Primer* to the roof surface with a *BRITE-n-EZ*TM *Scrub Pad* at least ten (10) inches in all directions from the pipe and allow it to dry to a finger touch. Slide the pipe boot down over the pipe. Stop a few inches from the roof surface and remove the backing paper from the boot exposing the tape adhesive. Slide the boot fully into place. Then using a *BRITE-n-EZ*TM *Steel Hand Roller*, roll the flange of the pipe boot so that it mates firmly to roofing membrane.

Install a stainless steel adjustable clamp ring over the pipe boot at the upper index ring. Apply BRITE-n- EZ^{TM} General Purpose Caulk around the top of the boot. See **Figure 37** for an illustration of a finished pipe boot assembly.



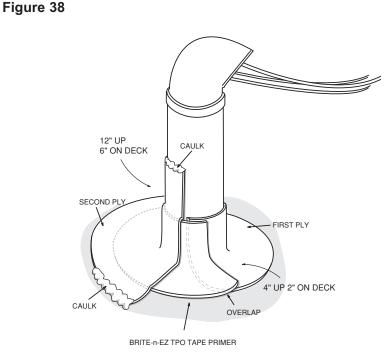
PIPE OR CONDUIT FLASHING USING BRITE-n-EZ™ UNCURED EPDM FLASHING

When a pipe or conduit is encountered that cannot be flashed with a *BRITE-n-EZ™ TPO Pipe Boot with Tape*, the protrusion must be flashed using 2-plys of *BRITE-n-EZ™ Uncured Black Flashing With Tape*.

Make sure to clean the protrusion, scrubbing vigorously to remove old, loose flashing material. Using the $BRITE-n-EZ^{TM}$ Scrub Pad apply TPO Tape Primer and $BRITE-n-EZ^{TM}$ Uncured Black Flashing With Tape at least 12" up vertical protrusion as well as 6" onto the roof surface.

Cutting from a roll of 12" wide *BRITE-n-EZ*TM Uncured Black Flashing with Tape cut a piece that is 9"x6" or smaller so that the flashing will not completely wrap the pipe. Using the *BRITE-n-EZ*TM *Scrub Pad apply TPO Tape Primer*. Remove the backing paper and fold the flashing back onto itself so that it is 2" and 4". Attach the 4" side to the vertical protrusion. Then, starting at the corners attach the 2" side of the flashing to the roof surface using your two thumbs and begin stretching the flashing onto the deck until your thumbs meet in the middle. Roll this flashing with the *BRITE-n-EZ*TM *Steel Hand Roller*. Prime the flashing just installed and do a second wrap from the other side of the penetration so that this second flashing will overlap the first at least two inch (2"). You should always roll the flashing just installed with a *BRITE-n-EZ*TM *Steel Hand Roller*.

After the first ply is completed, apply *BRITE-n-EZ*[™] *TPO Tape Primer* to the newly installed flashing. Cut additional pieces of flashing material and fold and install as in the paragraph above to fabricate the second ply of a **2-ply thick** flashing detail like that shown in **Figure 38**. The finished flashing should be 6" onto the deck and 12" up the penetration. To achieve this height a third wrap on the vertical surface may be required.



Roll the finished flashing with a steel roller and caulk the flashing on the deck and around the pipe with $BRITE-n-EZ^{TM}$ General Purpose Caulk. After the edge caulk has had time to set up you will want to apply $BRITE-n-EZ^{TM}$ Styrene/Acrylic White Coating.

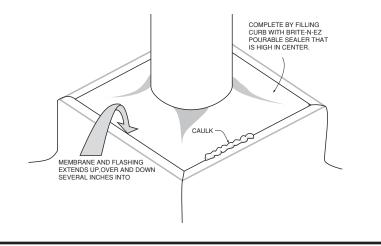
The *BRITE-n-EZ*[™] *Flashing* is, on its weathering surface, made of uncured black EPDM rubber membrane. For esthetics, coat this flashing with *BRITE-n-EZ*[™] Styrene/Acrylic White Coating. First using a *BRITE-n-EZ*[™] *Scrub Pad*, apply *BRITE-n-EZ*[™] *Coating Primer* to the surface of the flashing patch. Follow instructions for stirring primer noted on the can. This is an adhesion enhancing step that must be done to provide a suitable surface for the coating to bond to the EPDM. After the primer has dried, caulk the end cuts of the flashing where tape does not extend beyond the flashing patch with *BRITE-n-EZ*[™] *General Purpose Caulk*. Allow the caulk to partially dry (skim over). Later in the day, apply *BRITE-n-EZ*[™] *Styrene/Acrylic White Coating* to the black surface of the flashing. To achieve adequate hide of the black membrane, a second application of the white coating will be required after the first has dried.

FLASHING IRREGULAR SHAPED PENETRATIONS

When a large penetration is encountered on the roof top, build a square pitch pan at least 6" tall similar to the curb in **Figure 23** and securely fasten it to the deck. Install the membrane on the deck and up the pitch pan as shown in **Figure 27**. Additional membrane and flashing should be installed so that the pitch pan is water proofed on the outside as well as up and over the top and down several inches down on the inside of the pitch pan. The inside of the pitch pan will now be filled with BRITE-n-EZTM Pourable Sealer.

Remove the lids from *BRITE-n-EZTM* Pourable Sealer Part A and Part B containers. Part A is white and is very thick. Part B is black, very thin and free flowing. Pour the black Part B into the white Part A bucket. With the enclosed paddle and a power screw driver, carefully mix Parts A and B together. The black Part B will mix in the white Part A causing a marble effect in the sealer. Continue mixing until the *BRITE-n-EZTM* Pourable Sealer has a consistent gray look, at which time mixing is complete. Do Not Thin.

Pour the mixed sealer into the clean, dry pitch pan. Completely fill the pitch pan with $BRITE-n-EZ^{TM}$ Pourable Sealer. Enough pourable sealer should be added so that it is high in the center and it tapers down to just slightly higher than the edge of the pitch pan thus preventing any standing water. Once the pourable sealer has set up, caulk the edge of the pitch pan with $BRITE-n-EZ^{TM}$ TPO General Purpose Caulk as shown in **Figure 39**.



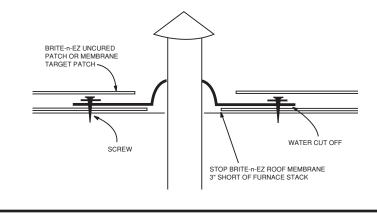
For smaller irregular penetrations you can also create a pitch pan using a $BRITE-n-EZ^{TM}$ Pipe Boot With Tape. Once the membrane has been installed, cut the top of a pipe boot at a ring where the boot will easily go over the penetration. Adhere the pipe boot as discussed in an earlier section. Mix the $BRITE-n-EZ^{TM}$ Pourable Sealer and pour into the pipe boot to achieve a rounding dome. When the pourable sealer has set up, install the stainless steel boot clamping ring and caulk the edge with $BRITE-n-EZ^{TM}$ General Purpose Caulk.

FURNACE PIPE PENETRATION

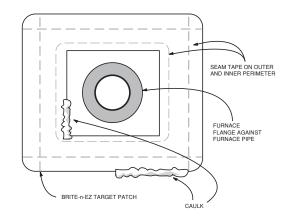
BRITE-n-EZ[™] TPO Membrane or flashing materials should never come in contact with a hot furnace pipe penetrating the roof.

If there is an existing furnace flange around the pipe that is attached to the deck, it should be removed. Install the membrane on the roof deck a shown in **Figure 22a** being certain to keep it back at least 3" from the hot furnace pipe.

Use *BRITE-n-EZTM* Membrane Cleaner to clean a new furnace flange thus removing any residual oil left from manufacturing the flange. Apply a liberal bead of *BRITE-n-EZTM* Water Cut-Off mastic to the underside circumference of the flange. Use *BRITE-n-EZTM* Cleaner to clean the membrane where the furnace flange will sit. Slide the flange over the furnace pipe and screw it to the deck as shown in **Figure 40**.







Cut a target patch from $BRITE-n-EZ^{TM}$ TPO Membrane that will extend beyond the perimeter of the furnace flange by at least 6" as shown in **Figure 41**. Cut a square hole in the center of the target patch slightly larger than the sloping center portion of the flange. Test fit the target patch and mark the outer edge of the patch on the roof top.

Lay the target patch upside down and using $BRITE-n-EZ^{TM}$ Scrub Pad apply $BRITE-n-EZ^{TM}$ TPO Tape Primer to the membrane around the 3" inner and outer perimeter. Also apply primer to the furnace flange in an area larger than the outline of the target patch. Set $BRITE-n-EZ^{TM}$ TPO Seam Tape around the inner and outer perimeter of the target patch and remove the backing paper. Seam tape should overlap itself at least 2" in each corner.

With the help of another person, center and carefully set the target patch down over the furnace flange and roll with a BRITE-n- EZ^{TM} Steel Hand Roller. Using *BRITE-n-EZ^TM* General Purpose Caulk apply a liberal bead around the outer and inner perimeter of the flashing patch.

This same detail can be done with *BRITE-n-EZTM* Uncured Black Flashing With Tape. Prime the furnace flashing and deck membrane out onto the furnace flange at least 6". Set one section of *BRITE-n-EZTM* Uncured Black Flashing With Tape on each side of the furnace flange that extend 6" beyond the flange. Prime the flashing, deck membrane and exposed furnace flange and set two more pieces of flashing on the yet to be covered sides of the furnace flange. Roll flashing with a steel hand roller. Using *BRITE-n-EZ*TM *General Purpose Caulk* apply a liberal bead around the outer and inner perimeter of the flashing patch. This flashing patch will have to be coated as discussed in the flashing sections above.

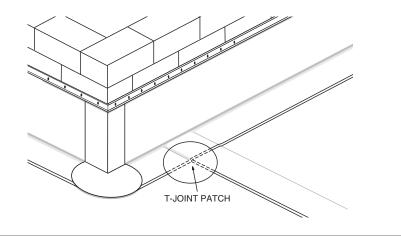
T-JOINTS

A T-Joint is formed when two sheets of *BRITE-n-EZ*TM *TPO Membrane* form a seam that travels under, or over, a third ply (example **Figure 42a**). The center of the "T" is where the middle sheet ends and the top sheet bridges over the middle sheet. This T-Joint can provide opportunity for water to seep under the membrane. To avoid problems at this area, a T-Joint patch should be installed. First, prime the membrane using the *BRITE-n-EZ*TM *Scrub Pad* and apply *BRITE-n-EZ*TM *TPO Tape Primer*. You must prime an area that is at least four inches (4") in all directions from the T-Joint. Cut a piece of *BRITE-n-EZ*TM *Uncured Black Flashing With Tape* that is 3"larger than the T-Joint and round the corners. A single T-Joint patch can be made large enough to accommodate more than one T-Joint, as shown in **Figure 42b**. Remove the plastic release liner and place the uncured flashing over the T-Joint. Roll the flashing with a *BRITE-n-EZ*TM *Steel Hand Roller*.

AREAS WHERE T-JOINT PATCHES ARE REQUIRED.

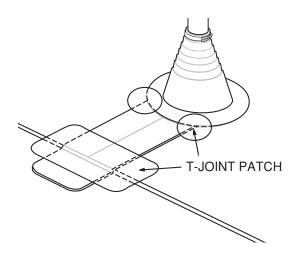
WHERE A FIELD SEAM TRAVELS UNDER A WALL FLASHING

Figure 42a



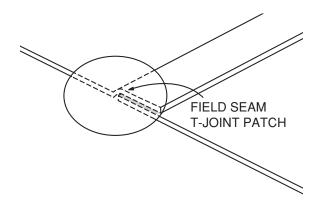
WHERE A COVER STRIP TRAVELS UNDER A PIPE BOOT OR OTHER FLASHING

Figure 42b



WHERE A SEAM RUNS PERPENDICULAR TO A PANEL IT OVER-LAPS

Figure 42c



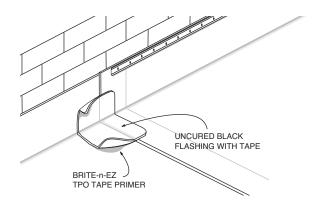
IMPORTANT: ONLY *BRITE-n-EZ™ FLASHING* CUT TO SIZE, IS USED FOR T-JOINT PATCHES BECAUSE THE MEMBRANE IS UNCURED AND CAN BE FORCED INTO CRACKS AND

CREVICES WITHOUT BRIDGING. ALL T-JOINT PATCHES SHOULD BE THOROUGHLY ROLLED WITH A *BRITE-n-EZ™ STEEL HAND ROLLER*. APPLY *BRITE-n-EZ™ COATING* TO T-JOINT PATCHES.

FIELD SEAM RADICAL BEND

Where a field seam makes a radical bend, that is, it turns up a wall as seen in **Figure 43** or down over a perimeter edge, a 6" x 9" piece of *BRITE-n-EZ*TM Uncured Black Flashing With Tape is to be adhered over the seam. Always round the corners to reduce the chance that the flashing will peel if caught by a shoe or other item. Install the flashing so that half of the flashing is on either side of the radical bend. Follow priming, caulking and coating procedures noted in the sections above.

Figure 43



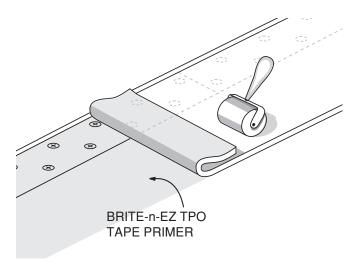
ROOF EDGE TERMINATION WITH METAL DRIP EDGE

When using self adhered membrane many installers find that it is best not to remove the plastic release liner from the membrane that extends over the edge of the roof. That is because it can be challenging to remove the excess membrane once the drip edge has been installed. This is not an issue with standard membrane. Pull the membrane over the edge of the roof and tack with roofing nails while keeping close to the upper edge of the fascia so the nails will be covered with the vertical portion of the drip edge.

Press the metal drip edge firmly against the membrane on the fascia. Using galvanized deck screws or galvanized ring shank nails drill through the horizontal side of the metal drip edge, through the membrane and into the deck. Spacing should be every six inches (6") on center.

Clean the horizontal side of the metal drip edge with a cotton cloth and BRITE-n- EZ^{TM} Membrane Cleaner to remove oils left on the metal from manufacturing. Using a BRITE-n- EZ^{TM} Scrub Pad, apply BRITE-n- EZ^{TM} TPO Tape Primer to the metal and field membrane along the entire length of the metal edge. Always use a back and forth motion with the BRITE-n- EZ^{TM} Scrub Pad. To ensure 100% adhesion, apply the primer to an area that is wider than the BRITE-n- EZ^{TM} TPO Cover Tape. After the primer has dried, install the BRITE-n- EZ^{TM} TPO Cover Tape one-half inch (1/2") in from the outside edge of the metal drip edge. Roll the entire length of the cover tape with a BRITE-n- EZ^{TM} Steel Hand Roller as shown in Figure 44.

Figure 44



When splicing two pieces of $BRITE-n-EZ^{TM}$ TPO Cover Tape, you should allow for a minimum lap of four inches (4"). Before overlapping the second strip of tape, be certain to prime the surface of the

first strip of cover tape. Since a T-joint is created by the overlapping pieces of cover tape it is recommended that a T-joint patch be applied.

TERMINATING *BRITE-n-EZ™* ON FASCIA

Many installers find that it is best not to remove the plastic release liner from the membrane that extends over the edge of the roof when using self adhered membrane. That is because it can be challenging to remove the excess membrane once the *BRITE-n-EZ*TM *Termination Bar* has been installed. Using *BRITE-n-EZ*TM *Termination Bar* in either 5' or 10' lengths and an appropriate length *BRITE-n-EZ*TM *Screw* that has a corrosion reduction coating, secure the termination bar with a screw in every hole. Leave a 1/4" gap between consecutive termination bars for expansion. See **Figure 45**.

Where the membrane wraps an inside or outside corner, you should create a flap and tack it to one side of the fascia with a roofing nail. Termination bar can easily be bent to conform to an inside or outside corner. With a utility knife cut excess membrane from the bottom side of the termination bar. Many contractors apply a bead of BRITE-n-EZTM General Purpose Caulk to the top of the termination bar. They also put a spot of *BRITE-n-EZTM* General Purpose Caulk over each screw to prevent water from penetrating around the screw and rotting the fascia.

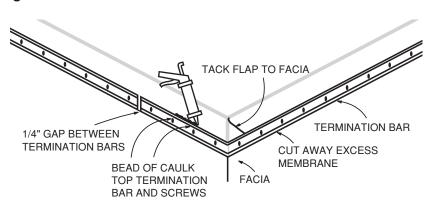


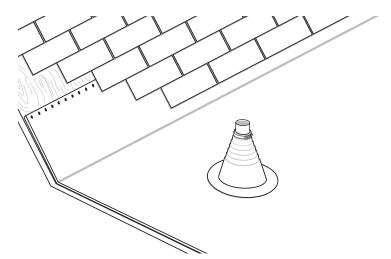
Figure 45

BRITE-n-EZTM MEMBRANE TO SHINGLE TRANSITION

When installing BRITE- $n-EZ^{TM}$ TPO Membrane that goes from a nearly flat deck to a pitched shingle roof, the membrane must travel up and under at least 3 courses of singles to prevent ice and water back up. See **Figure 46**.

When tying into an existing shingle roof, remove a minimum of three (3) courses of shingles. Adhere the membrane onto the sloped roof deck following procedures noted in earlier sections. Reinstall the shingles over the membrane. One should keep the bottom course of shingles a minimum of four inches (4") above the roof angle change to avoid the membrane being cut by the sharp edge of a single as the building moves. Lift each tab of the first course of shingles and apply a one-inch (1") long bead of BRITE-n-EZTM General Purpose Caulk.</sup>

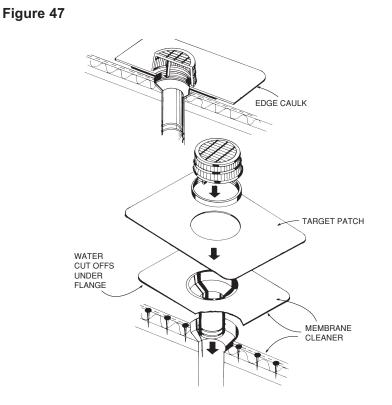
Figure 46



ONE PIECE DRAIN SLEEVE INSERT

Drain Sleeve Inserts are used when the existing drain does not have a clamping ring assembly, or cannot be removed, properly cleaned and incorporated into the new roofing system. **NOTE:** Before beginning the reroof project, thoroughly clean the existing drain. Do not allow debris to clog the drain pipe. A new drain insert which is available from Water Tight Technologies, should be lower than the new roof system surface. Install the field membrane over the drain. Cut a circle in the membrane that is the size of the drain sleeve. Clean the field membrane and both sides of the drain sleeve insert with *BRITE-n-EZ*TM *Membrane Cleaner*. Apply a generous bead of *BRITE-n-EZ*TM *Water Cut-Off Mastic* to the bottom metal flange of the drain sleeve insert. Slide the insert into the drain pipe so that the flange is under the membrane. Mechanically fasten the drain sleeve using the proper length deck screws with two inch (2") or three inch (3") plates.

Cut a target patch from *BRITE-n-EZ™* TPO Membrane that will extend beyond the perimeter of the drain flange by at least 6" as shown in Figure 47. Cut a hole in the center of the target patch larger than the strainer securing ring. Test fit the target patch and mark the outer edge of the patch on the roof top. Lay the target patch upside down and using BRITE-n-EZ[™] Scrub Pad apply BRITE-n-EZ[™] TPO Tape Primer to the membrane around the 3" inner and outer perimeter. Set BRITE-n-EZ™ TPO Seam Tape around the inner and outer perimeter of the target patch. Allow the seam tape to extend into the opening of the drain flange. Remove the backing paper and roll any excess tape in the center circle to the upper side of the membrane that will be covered by the strainer. Apply BRITE-n-EZ[™] TPO Tape Primer to the outer and inner perimeter of the membrane and drain flange in an area larger than the target patch. Carefully set the target patch down over the drain flange and roll with a BRITE-n-EZ[™] Steel Hand Roller. Using BRITE-n-EZ[™] General *Purpose Caulk* apply a continuous "high profile" bead around the perimeter of the flashing patch and around the center of the patch where it meets the strainer.



DRAINS WITH CLAMPING RINGS

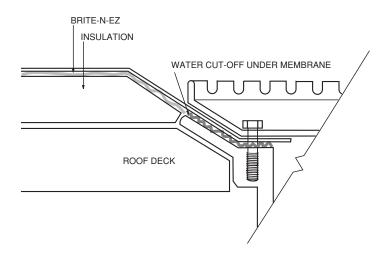
If the existing drain has a clamping ring assembly, remove the strainer, clamping ring bolts and clamping ring. Clean the drain bowl, clamping ring flange and clamping ring. Do not allow debris to clog drain pipe.

Install the field membrane over the drain. To determine where to cut the hole, place the drain clamping ring over the membrane onto the clamping ring flange. Allow the membrane to extend one inch (1") past the clamping ring.

After the membrane has been cut, lift the membrane and apply several generous beads of $BRITE-n-EZ^{TM}$ Water Cut-Off Mastic to the clamping ring flange. It is recommended to use a minimum of one-half (1/2) tube per drain.

Align the clamping ring over the membrane and punch holes where necessary to install the clamping ring bolts. Do not cut the membrane back to the bolts. Secure the clamping ring and install the strainer.

Figure 48

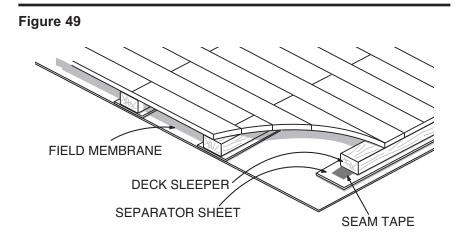


PROTECTING *BRITE-n-EZ™* MEMBRANE IN HIGH FOOT TRAFFIC AREAS (DECKS)

IMPORTANT — THE BRITE-n-EZ[™] TPO MEMBRANE IS NOT DESIGNED AS A FINAL WALKING SURFACE AND SHOULD BE PROTECTED FROM EXCESSIVE FOOT TRAFFIC. THE FOLLOW-ING ARE OPTIONS TO BE CONSIDERED:

Covering With Wood Deck

When installing a wood deck over a *BRITE-n-EZ*TM *TPO Membrane*, the deck sleepers should be laid over an extra piece of BRITE-n-EZTM *TPO Membrane* called a separator sheet. The separator sheet is cut from *BRITE-n-EZ*TM membrane and should extend a minimum of two inches (2") past the sleeper on all side. Prime the separator sheet and apply TPO seam tape. Apply primer to the bottom of the sleeper and adhere the separator sheet. This tape will keep the sleeper from moving as the deck is installed.



DO NOT attach the sleepers through the membrane. The deck should be secured at a sidewall, post, or perimeter area.

Covering With Exterior Grade Carpet

When attaching an outdoor carpet, roll on any exterior grade carpet adhesive recommended by the carpet manufacturer. Install the carpet according to carpet manufacturer's instructions.

REPAIR OF BRITE-n-EZ™ MEMBRANE

If your *BRITE-n-EZ*TM Membrane is punctured, repairs can be made easily. Clean the membrane with *BRITE-n-EZ*TM *Membrane Cleaner*. Using *BRITE-n-EZ*TM *Scrub Pad* apply *BRITE-n-EZ*TM *TPO Tape Primer* to an area at least four inches (4") in all directions from puncture. After the primer has flashed off, cut a piece of *BRITE-n-EZ*TM *TPO Cover Tape* larger than the puncture and round corners. Remove the plastic release liner and center the patch over the puncture. Roll the patch with a *BRITE-n-EZ*TM *Steel Hand Roller*. Using *BRITE-n-EZ*TM *General Purpose Caulk* apply a continuous "high profile" bead around the perimeter of the cover tape.

BRITE-n-EZ[™] TPO MEMBRANE LIMITED WARRANTY

BRITE-n-EZ[™] TPO Membrane (both 45 mil and 60 mil thickness) in a fully adhered roof installation using BRITE-n-EZ[™] Bonding Adhesive is warranted against premature deterioration to the point of failure due to weathering for a period of fifteen (15) years when installed using BRITE-n-EZ[™] system accessories. (Other than BRITE-n-EZ[™] products in the system may cause pre-mature deterioration). BRITE-n-EZ[™] <u>Self Adhered</u> TPO Membrane is warranted against premature deterioration to the point of failure due to weathering for a period ten (10) years when installed using BRITE-n-EZ[™] system accessories.

The holder of a *BRITE-n-EZ*[™] warranty must keep receipts showing that both the membrane and other accessories are *BRITE-n-EZ*[™] products. This warranty is not transferable to subsequent owners. Water Tight Technologies, LLC's (WTT) liability is limited to providing a credit for replacement membrane. The value of the credit will be determined on a pro-rata basis as follows: 100 % replacement value in the first year. That amount is reduced by 6.67% in subsequent years for a 15 year warranty and by 10% in subsequent years for a 10 year warranty. Replacement accessories, materials supplied by others and replacement material shipping costs are not included in this warranty.

A claim under this warranty must be made within 90 days from the date such leaks are discovered otherwise the claim shall be deemed to have been irrevocably waived by the owner. In order for a claim to be considered by Water Tight Technologies, LLC the following must be submitted: a current picture of the roof installation showing membrane deterioration; a sample of material said to have deteriorated; and original receipts showing membrane and accessories are BRITE-n-EZ[™] products. WTT reserves the right to inspect the roof before compensation is made under this warranty. This warranty is voided if the *BRITE-n-EZ*[™] membrane is removed from the rooftop before a WTT representative is given the opportunity to inspect the roof for improper use of non- BRITE-n-EZ[™] products or exposure to any of the non-warranted conditions noted below. This warranty does not cover the workmanship of the installer of BRITE-n- EZ™ products nor does it assure the roof will not leak due to poor workmanship of the installer. This warranty applies only to BRITE-n- EZ™ membrane installed on projects that have been registered by mailing (U.S. Postal service) the BRITE-n-EZ[™] registration card or by completing the registration information found on the WTT website. Failure to use an original warranty card or to completely fill in requested warranty information will void the warranty. It is not WTT's responsibility to return a card for more complete information.

Warranty registration by mail and Warranty claims must be made in writing and mailed to Water Tight Technologies, LLC, at P.O. Box 899, Payson, AZ 85547.

The remedy stated herein is the SOLE AND EXCLUSIVE REMEDY for failure of the roofing membrane. WTT SHALL UNDER NO CIR-CUMSTANCES BE LIABLE FOR INCIDENTAL OR CONSEQUEN-TIAL DAMAGES INCLUDING BUT NOT LIMITED TO DAMAGES TO THE BUILDING OR THE CONTENTS OF THE BUILDING. THERE ARE NO EXPRESS WARRANTIES EXCEPT AS STATED HEREIN, AND THERE ARE NO IMPLIED WARRANTIES OF ANY KIND, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. This warranty shall not be applicable to damage or loss caused in whole or in part by: overexposure to commercial/industrial solvents, acids, caustic fluids, oils, waxes, greases, absorbent clays, bleaches, plasticizers or other harmful chemicals, deterioration or failure of any building component including, but not limited to, the roof substrate, walls or mortar, foot traffic, misuse or abuse, natural disasters including but not limited to hail, lightning, wind, or similar natural disasters.

This warranty applies to *BRITE-n-EZ*[™] purchased after May 1, 2008. Water Tight Technologies, LLC reserves the right to modify and/or withdraw said warranty for future purchases at its discretion having given advance notification to its dealers.

WARRANTY REGISTRATION

Warranty Registration Cards are available to print on line at www. BRITEnEZ.com. Complete this card and mail it in.

This same warranty may be registered by going to www.BRITEnEZ.com. For the warranty section see the site map on the home page. You may print a copy of your registered warranty and retain with your proof of purchase documents.

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