

TUFFStik

SELF-ADHESIVE SBS MODIFIED BITUMEN

BENEFITS OF SELF ADHESIVE MODIFIED BITUMEN

TUFFStik® SA modified bitumen membranes offer a safe installation option where torch welding, hot asphalt and/or the odors of cold adhesive or asphalt fumes are not desired. Some other significant advantages are:

- Appearance: Neat and clean to install, several color options available.
- Odor Friendly: No fumes or offensive odors.
- Less Equipment: No torches or kettles required.
- Speed of Installation: Faster and less labor intensive, ease of installation.

IDEAL USES

TUFFStik® SA membranes are ideal for almost any low-sloped roof. Whether your project is a small residential tie-in, sunroof, garage, or carport, TUFFStik® SA membranes are designed for easy, faster installation, and helping you achieve a better bottom line and giving the roofing professional what they want and need out of a quality product.

TUFFStik® SA membranes have the following characteristics:

- Superior impermeability to water.
- Flexibility at low temperatures.
- High resistance to thermal degradation.
- Greater tensile and tear resistance, elongation which helps to accommodate certain building movements.
- With insulation, provides an even better-performing building component.
- Better resistance against foot traffic and common rooftop abuse when needed.

TUFFStik® NAIL BASE: Designed to be used as the primary base sheet that is mechanically attached to a wood or plywood deck. Sanded bottom with a permanent film surface top for TUFFStik® SA Base or TUFFStik® SA Cap to bond directly to.

TUFFStik® SA BASE: Self-Adhesive SBS modified bitumen base sheet with a fiberglass reinforcement. Has a split back release film on the underside and a permanent film surface top. It is designed to be used as a self-adhesive base sheet over compatible insulation or TUFFStik® Nail Base. TUFFStik® SA Cap is intended to be applied directly over the TUFFStik® SA Base.

TUFFStik® SA CAP: Self-Adhesive SBS modified bitumen cap sheet with a polyester reinforced ment. Has a split back release film on the underside and a granule surface top. It is designed to be used as a self-adhesive cap sheet directly over TUFFStik® Nail Base or TUFFStik® SA Base. Color options are: White, Black, Tan, Cedar Blend, Hickory, and Weathered Wood.

U.S. Ply warrants that, at the time of delivery, the U.S. Ply Material delivered shall conform to seller's specifications therefor free and clear of all liens and encumbrances. THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, and of any other obligations or liability on the part of U.S. PLY whether any claim against it is based upon STRICT LIABILITY, NEGLIGENCE, BREACH OF WARRANTY OR ANY OTHER THEORY OR CAUSE OF ACTION. In no event shall U.S. Ply be liable for CONSEQUENTIAL OR INCIDENTAL DAMAGES of any kind, including but not limited to interior damage. Recommendations made by U.S. Ply are believed to be reliable, but U.S. Ply makes no warranty of results to be obtained. If any of the U.S. Ply material fails to conform to the foregoing warranty, SELLER'S SOLE AND EXCLUSIVE REMEDY shall be the replacement of such non-conforming material, provided that such material has been handled and installed in accordance with seller's published handling procedures and installation specifications. This warranty does not apply to, and seller shall not be liable for, labor costs or any other damages resulting from improper or faulty installation of material. The Seller shall also not be liable for labor costs or any other damages resulting from failure of the material itself. Regardless of the theory on which a claim may be made including, without limitation, negligence, contract, breach of warranty, strict liability in tort, misrepresentation, or otherwise, with respect to material delivered or for failure to deliver any material, no claims of any kind whatsoever shall be greater in amount than the purchase price of the material in respect of which damages are claimed. In NO event shall U.S. Ply be liable for INCIDENTAL, CONSEQUENTIAL, SPECIAL, INDIRECT OR PUNITIVE DAMAGES.



RECOMMENDED TOOLS

1. Hammer and utility knife with hooked blade
2. Screw gun (¼ horsepower or stronger)
3. 75 lb. field roller (long handled) and detail roller (2" – 4" width)
4. Roofer's or masonry trowel with rounded tip
5. Caulk gun
6. Seam probe
7. Nails and/or roofing fasteners as required
8. Tin snips for cutting metal
9. Sheet metal and metal accessories as required
10. USP® #954 SBS Flashing Cement (pail or caulk grade)
11. USP® SA Primer and/or USP® #41 Standard Asphalt Primer as required
12. Hot-air welder (110 volt power hand-held device) and electrical cord
13. ABC type fire extinguisher is required if a hot-air welding device is present

PRODUCT SPECIFICATIONS

Criteria	TUFF Stik® Nail Base	TUFF Stik® SA Base	TUFF Stik® SA Cap
ASTM Designation	D4601	D1970, D4601	D6164 Type I Grade G
Roll Dimensions	39-3/8" x 64'6" (1m x 20m)	39-3/8" x 64'6" (1m x 20m)	39-3/8" x 32'9" (1m x 10m)
Roll Weight	82 lbs (37.2 kg)	84 lbs (38.1 kg)	95 lbs (43.1 kg)
Coverage	Two (2) Squares	Two (2) Squares	One (1) Square
Thickness	1.5 mm (60 mils)	1.5 mm (60 mils)	3.8 mm (150 mils)
Application Method	Mechanical	Self-Adhesive	Self-Adhesive
Function	Anchor Sheet/Base Sheet	Base/Interply	Cap

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The sizes and weight listed are approximate and are for unapplied rolls.

TUFFStik® SA MEMBRANE APPLICATION

Substrates must be inspected and accepted by the contractor as suitable to receive and hold roof membrane materials. All decks must have positive drainage. Ponding or standing water conditions are excluded from warranty coverage. Substrates must be clean, dry and free of moisture and dust or other bonding inhibitors that affect proper adhesion. Primer, when required, must be applied at the specified rate and must be allowed adequate time to dry.

Store rolls in original cartons indoors on pallets, protected from the elements above 70°F (21.1°C) for a minimum of 24 hours, prior to application. If stored outside, protect from extreme heat and weather by covering with a light colored breathable opaque tarp to allow venting and protection from weather and moisture. Cover and protect materials at the end of each day's work. Do not remove any protective tarpaulins until immediately before material will be installed. For best results, store all materials in a shaded area at the job site, even if provisions for covering and ventilation have been performed. When no shaded areas exist for storage, it is recommended to place a layer of minimum 1" thick polyisocyanurate insulation over the top of the cartons under the tarpaulins to reduce the heat on the rolls and in order to reduce the possibility of rolls sticking or experiencing difficulty in removing the poly release film backing. DO NOT STORE product in direct sunlight or on the rooftop during extremely high temperatures (over 110°F [43.3°C]) or when temperatures will drop below 50°F (10°C). If it is necessary to store materials on the rooftop, no more material should be stored on the roof than can be used within a few days. Keep in cartons until ready for use. Rolls that are improperly stored or have been warehoused for prolonged periods of time may lose their tack or may experience difficulty removing the poly release film backing. Do not apply membrane that has been improperly stored, exposed to moisture, or has lost its tack. If the material does not bond, STOP the application.

Ambient temperature must be 50°F (10.6°C) or above with a minimum of 2 hours of exposure to direct sunlight. Warm weather conditions and exposure to direct sunlight are essential for proper adhesion. The self-adhesive compound will not activate if installed below the recommended temperatures and/or if the material temperature is below 70°F. Conditions without exposure to direct sunlight may not allow sufficient thermal heating and may affect adhesion. If product is applied in temperatures above 110°F (43.3°C), it may result in difficulty in removing the poly release film backing from the underside. If this situation should occur, move the product to a shaded area until the product has cooled sufficiently. Once cooled, the poly release film backing can be easily removed. Note: Exposure to excessive heat may cause sagging of compound on vertical surfaces.

Start the installation of all membrane plies at the low point or drains, so the flow of water is over or parallel to the ply laps, but never against the laps.

Refer to "Steep Slope Requirements" and "Back-nailing of Membrane" on slopes 2" per foot (16.7 cm per meter) or greater.

When applying TUFFStik® membranes directly to the substrate, allow for adequate roof ventilation into the system through the use of roof relief vents.

TUFFStik® SA BASE membrane cannot be mixed with other type of membranes other than TUFFStik® SA membranes. Non SA Cap membranes are unacceptable. The top film surfacing cannot receive torch, hot asphalt, cold adhesive or other applications other than self-adhesive application. Do not use cold adhesives with TUFFStik® SA membranes other than for flashing details and cap sheet end laps as described herein and as shown in the Flashing Details of this Manual.

Chemicals such as oils, petroleum distillates, greases, liquid gases, solvents, and carbon tetrachloride are not compatible with the TUFFStik® membranes.

TUFFStik® SA BASE APPLICATION

TUFFStik® SA Base may be applied as the base layer of properly installed ISO insulation, TUFFStik® Nail Base, and primed structural concrete decks. No other substrates are suitable for direct membrane application without prior written approval from the U.S. Ply Technical Services Manager.

Sweep the surface of the insulation boards to remove any dust, dirt, sand or other bond inhibiting particles that could interfere with adhesion.

1. Roll out TUFFStik® and allow the base to relax prior to application. Cut rolls into manageable lengths for best results.
2. Keep the box for storage on the roof to use as a receptacle for discarding release film.
3. Start with a half roll width at low point of roof or drains for maximum offset between base and cap. Roll sheet out and set to align.
4. Fold the membrane back halfway lengthwise to remove the half of the poly release film on the underside from the up slope side of the roll and set in place then flip back the other half of the roll and remove the down slope side of the second half of the release film on the underside of the roll in a smooth continuous process. Note: When removing the poly release film from the underside of the roll, you should intend to simultaneously bond the side lap together.

5. Firmly adhere the membrane by direct contact pressure to the desired substrate. Apply pressure from the center of the sheet outwards towards the membrane sides and ends.

6. Use a weighted field roller to assure maximum contact of the membrane with the substrate working out all air pockets, voids and un-adhered areas that will prevent bonding of membrane to underlying substrate.

7. Continue installing the membrane up slope lapping the side laps 2" (5 cm) and 6" (15.2 cm) on the end laps. Stagger all end laps a minimum of 18" (45.7 cm) from one another.

8. Check all joints and laps for full adhesion before the end of each day. If the membrane can be lifted in any area, it is not properly adhered. A seam probing tool can be helpful to check for small voids at laps.

9. At end laps, cut the selvage edges of the upper and lower sheet at opposing diagonal corners at 45° degree angles to prevent a capillary void and apply a bead of USP® 954 Premium SBS Flashing Cement to the angle cut. Trimmed corners should be completely covered by application of succeeding roll course. Apply a bead of USP® 954 SBS Flashing Cement within the end lap area in a serpentine pattern and spread the adhesive with a trowel along the entire 6" (15 cm) lap width before setting the end lap in place.

10. Note: Warm weather conditions and exposure to direct sunlight are essential for proper adhesion. The self-adhesive compound will not activate if installed below the recommended temperatures and/or if the material temperature is below 70°F.

11. In cooler weather, if necessary, a hot air welding designed for sealing modified bitumen seams and a hand-held seaming roller may be used to seal the side and end laps areas and enhance adhesion prior to the application of the USP® 954 SBS Flashing Cement at end laps.

12. Use product box for discarding poly release film. After completion of job discard product box.

13. Do not leave the TUFFStik® SA Base membrane exposed to the weather, cover with TUFFStik® SA CAP the same day.

TUFFStik® SA Cap MEMBRANE APPLICATION

TUFFStik® SA Cap may be applied to properly installed TUFFStik® Nail Base, and TUFFStik® SA Base. No other membranes or substrates are suitable for direct application of TUFFStik® SA Cap.

1. Roll out TUFFStik® and allow the base to relax prior to application. Cut rolls into manageable lengths for best results.

2. Keep the box for storage on the roof to use as a receptacle for discarding release film.

3. Start with a full roll width at low point of roof or drains for maximum offset between base and cap. Roll sheet out and set to align.

4. Fold the membrane back halfway lengthwise to remove the half of the poly release film on the underside from the up-slope side of the roll and set in place then flip back the other half of the roll and remove the downslope side of the second half of the release film on the underside of the roll in a smooth continuous process. Do not remove the release film from the selvage edge as yet.

5. Firmly adhere the membrane by direct contact pressure to the desired substrate. Apply pressure from the center of the sheet outwards towards the membrane sides and ends.

6. Use a weighted field roller to assure maximum contact of the membrane with the substrate working out all air pockets, voids and un-adhered areas that will prevent bonding of membrane to underlying substrate.

7. Continue installing the membrane up slope lapping the side laps 4" (10 cm) and 6" (15.2 cm) on the end laps. Stagger all end laps a minimum of 18" (45.7 cm) from one another.

8. Remove the release film from the selvage edge of the in-place adjacent sheet and the poly release film from the underside of the roll being installed to simultaneously bond the side lap together.

9. At end laps, cut the selvage edges of the upper and lower sheet at opposing diagonal corners at 45° degree angles to prevent a capillary void and apply a bead of USP® 954 Premium SBS Flashing Cement to the angle cut. Trimmed corners should be completely covered by application of succeeding roll course. Apply a bead of USP® 954 Premium SBS Flashing Cement within the end lap area in a serpentine pattern and spread the adhesive with a trowel along the entire 6" lap width before setting the end lap in place.

10. In cooler weather, if necessary, a hot air welding designed for sealing modified bitumen seams and a hand-held seaming roller may be used to seal the side and end laps areas and enhance adhesion prior to the application of the USP® 954 SBS Flashing Cement at end laps.

11. Use product box for discarding poly release film. After completion of job discard product box.