

# BITEC PRODUCTS

## CAP SHEETS

<b>APS-4T</b> .....	Torch Applied
<b>APM-4T</b> .....	Torch Applied
<b>APM-4.5T</b> .....	Torch Applied
<b>SPM-4.5T</b> .....	Torch Applied
<b>SPM-3.5H</b> .....	Mop Applied
<b>SPM-4H</b> .....	Mop Applied
<b>SPM-4H-250</b> .....	Mop Applied
<b>SPS-3H</b> .....	Mop Applied
<b>SFM-3.5H</b> .....	Mop Applied
<b>SFM-3.5H-FR</b> .....	Mop Applied
<b>SFM-4H-FR</b> .....	Mop Applied

## BASE SHEETS

<b>FA-2T</b> .....	Torch Applied
<b>FS-2H</b> .....	Mop Applied
<b>FS-2H Plus</b> .....	Mop Applied
<b>PS-2H</b> .....	Mop Applied
<b>FS-25</b> .....	Mop Applied
<b>FS-40</b> .....	Mop Applied
<b>BFS-2H</b> .....	Mop Applied
<b>FS-2H-FR</b> .....	Mop Applied
<b>Beta Base</b> .....	Mop or Mech. Attached

## FIRE RATED MEMBRANES

BITEC "FR" membranes provide UL Class "A" fire-rated assemblies for slopes up to 3/4" in 12" (3/4":12") without the use of additional coating. "FR" membranes are reinforced with a high-strength fiberglass mat.

## MINERAL DESIGN

BITEC's "Mineral Design" cap sheet membranes provide an attractive design to otherwise ordinary roof areas. Mineral design is available in both APP (MDA) and SBS (MDS), in eight patterns and 13 granule colors.

## POLYMER ADHESIVES

For application of mop grade membrane sheets: PMA-186 for squeegee, roller or brush application and trowel grade PMA-2000. Both are excellent for filling pitch pans and sealing penetration flashings.

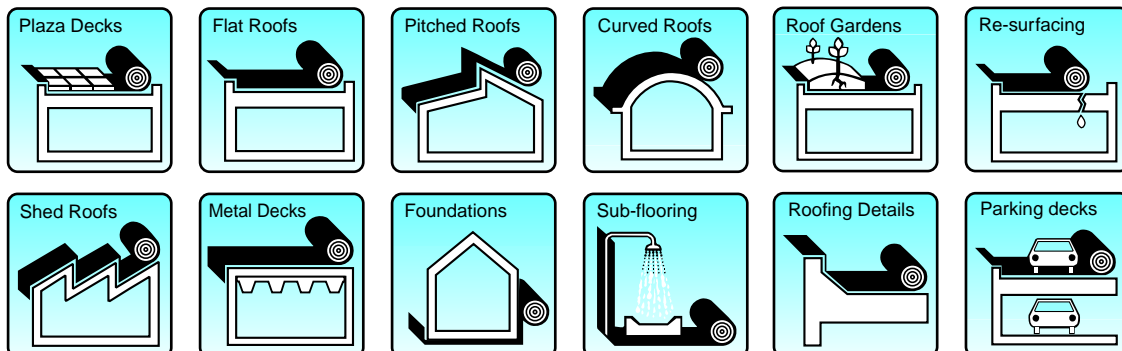
### PRODUCT NAMES - CAP SHEETS using example: APS-4T

- A** - Modifier .....A = APP or S = SBS
- P** - Reinforcement.....P = Polyester, F = Fiberglass
- S** - Surface .....S = Smooth, M = Mineral
- 4** - Thickness .....2, 3, 3.5, 4 or 4.5 Millimeters
- T** - Application .....T = Torch, H = Hot Asphalt

### PRODUCT NAMES - BASE SHEETS using example: FS-2H

- F** - Reinforcement.....P = Polyester, F = Fiberglass
- S** - Modifier .....S = SBS or A = APP
- 2** - Thickness .....1, 2, or 2.2 Millimeters
- H** - Application .....T = Torch, H = Hot Asphalt

FR - Fire Rated; Class "A" UL-Rated Cap sheets and Base sheets



# APP MEMBRANES

## Versatile, Long Lasting and Weather Resistant

BITEC APP modified bitumen membranes are composed of select APP polymers blended with distilled asphalt and reinforced with a Spunbond Polyester fabric.

All BITEC APP membranes are installed by **HEAT WELDING** and have the following characteristics:

- High melting temperatures
- Flexibility at low temperatures
- High resistance to thermal degradation
- Resistance to ultraviolet light degradation.
- Excellent substrate adhesion
- Resistance to most acids and bases
- Impermeability to water

BITEC APP modified bitumen membranes may be used to waterproof prefabricated concrete roofs, roof systems with metal and wood decks, thermal insulations, paved roofs or walkways, foundations, and constructions such as multi-story parking decks.

BITEC APS-4T, a smooth surfaced APP modified bitumen membrane, can be coated or left uncoated according to the specific system specification.

BITEC APM-4T, a mineral surfaced APP modified bitumen membrane, contains factory installed roofing granules which eliminate the need for installing a protective coating. Mineral surfacings reduce ther-

mal and ultraviolet light degradation, and slow the normal processes of membrane ageing.

BITEC membranes that are applied by heat welding contain a polypropylene and/or polyethylene covering to prevent roll blocking and provide a site indicator for proper welding temperature. These films will melt, allowing the APP modified bitumen compound to adhere to itself and the substrate being bonded to.

The only tools required for application of BITEC APP membranes are a propane gas fired roofer's torch, a round nose roofer's trowel, a hookblade roofer's knife and a pair of fire resistant gloves.

# SBS MEMBRANES

## Strong and Flexible for Demanding Applications

BITEC SBS modified bitumen membranes are composed of styrene-butadiene-styrene thermoplastic rubber, blended with distilled asphalt and reinforced with a Spunbond Polyester fabric or high strength fiber glass mat.

BITEC SBS membranes are manufactured to suit a variety of application methods, and possess the following characteristics:

- Impermeability to water
- Outstanding flexibility at very low temperatures
- Resistance to thermal aging
- Excellent substrate adhesion
- Resistance to perforation
- Superior elasticity
- Excellent mechanical and fatigue strength
- Tear resistance
- Dimensional stability

It is necessary to have a factory installed or on-site installed surfacing on SBS modified bitumen membranes, therefore, most of BITEC's SBS modified bitumen membranes come with factory installed roofing granules for this purpose.

With our smooth surfaced product SPS-3H, a site installed surfacing of either a flood coat and gravel, or approved roof coating must be applied for ultraviolet light protection.

OUR SPM and SFM family of membranes contain factory installed roofing granules eliminating the need to add on-site surfacings.

Tools required for the proper application of these products are detailed in the BITEC product manual and technical bulletins relative to the specific SBS modified bitumen membrane being used.

For heat welded systems, bonding is performed with a propane gas fired roofer's torch.

For hot asphalt applied systems, bonding is performed with the use of ASTM D312 Type III, or Type IV roofing asphalt applied with conventional equipment.

For cold adhesive applied systems, bonding should be performed with BITEC elastomeric adhesives, or with any BITEC approved elastomeric adhesives. For all applications, the membrane should be laid out, aligned and completely bonded to the substrate as prescribed in the project's written specification, and is contingent upon the specific method of application.

Particular care should be taken to ensure that all seams or laps are completely sealed.

As always, good roofing practices should be considered and used.

# COLD APPLIED SYSTEMS

## INTRODUCTION

BITEC's cold adhesive applied SBS modified bitumen membranes give you better security and performance than conventional roll roofing products made with oxidized asphalt.

Their application range covers a variety of slopes and deck configurations. From 1/4" in 12" up to 3" in 12", the membrane is functional. Another advantage is that hot asphalt and open flame are not required for installation. This reduces the potential for fire.

A specially formulated cold adhesive is used to install the membrane. After a short curing time the cold adhesive applied system forms a flexible, durable, watertight system that will outlast conventional roofing systems.

## PRODUCTS

BITEC SBS modified bitumen membranes SPM-3.5H and SFM-3.5H are recommended for use by this method. However, any BITEC sand surfaced SBS modified bitumen product can be installed using cold applied adhesives. These membranes are tear and puncture resistant, have excellent flexibility and performance as opposed to conventional organic and fiberglass reinforced blown asphalt coated membranes.

BITEC SBS modified bitumen membranes are composed of distilled asphalt modified with SBS thermoplastic rubber. A high strength fiberglass or polyester reinforcement is used as support.

## ADHESIVES

BITEC PMA 186 field grade SBS modified bitumen adhesive is recommended for use on low slope applications, while PMA 2000, trowel grade SBS modified bitumen adhesive is recommended for all flashings and higher slope applications.

Both adhesives contain an SBS thermoplastic rubber as a modifier,

ensuring complete compatibility between the cap sheet and the adhesive.

## GENERAL REQUIREMENTS

Follow all good roofing practices, and BITEC specifications when installing adhesive applied membranes. Base sheet and insulation must be mechanically attached to deck.

Use only BITEC SBS modified bitumen membranes having sand on the bottom surface and granules on the top surface. (SPM-3.5H or SFM-3.5H).

Adhesive may be applied at temperatures between 55°F and 120°F. Only BITEC approved adhesives should be used to install these membranes. Follow adhesive manufacturer's application rates when installing these membranes. Typically, application rates will be 1½ gallons per 100 ft<sup>2</sup>. Apply adhesive by notched squeegee with notches 1/4" long, 1/8" deep and spaced 1" on center, or by using a three knot brush or notched trowel.

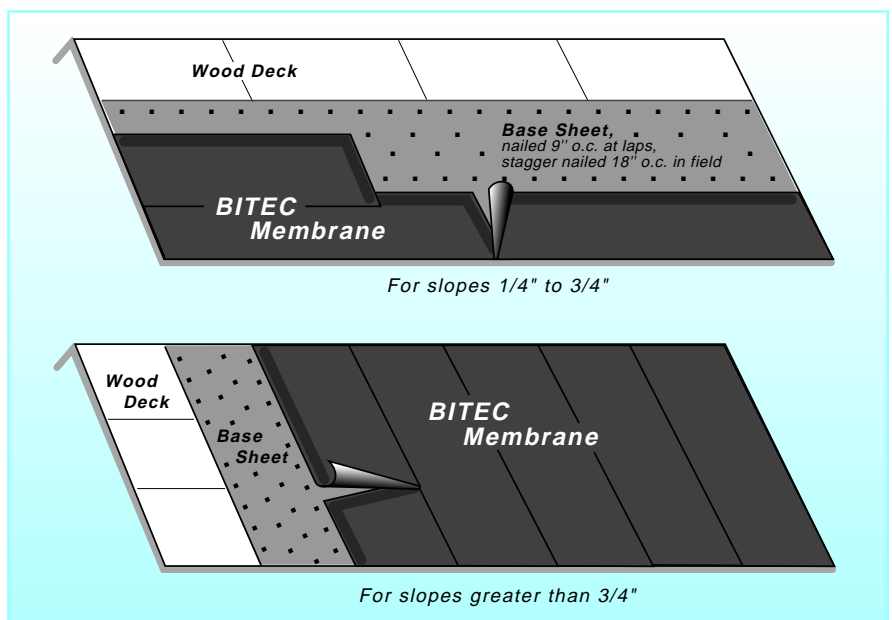
Trowel grade flashing cement should be applied 1/8" thick over the area receiving the flashing membrane at an application rate of 1 gal. per 20 sq. ft. or 5 gal. per 100 sq. ft.

Deck should be built with 1/2" min. plywood or 3/4" min. wood boards. Deck shall be dry, smooth and free of debris. Deck should be built to provide 1/4" in 12" minimum slope.

Base sheet should be UL Listed Type G2 or 43# organic. Base sheet must be attached using suitable fasteners (i.e. Simplex nails) 9" on the laps and stagger nailed 18" o.c. in the field.

Flashing material shall be the same material used for field membrane. Slopes above 3/4:12 require the base sheet and membrane to be installed parallel to the slope with base sheet fastened as noted above. The cap sheet membrane should be blind fastened at end laps, 2" from the top edge and 6" o.c. across the sheet width, using nails and tin discs or screws and plates.

- Performs Better than Conventional Roll Roofing
- No Hot Asphalt or Open Flame Required
- Excellent Tear and Puncture Resistance
- Easy to Apply, Easy to Maintain
- Excellent Cold Flexibility



# COLD APPLIED SYSTEM ADHESIVES

## PMA-186

### POLYMER MODIFIED ADHESIVE For Squeegee, roller or brush application.

PMA-186 is a fibrated, heavy bodied, SBS rubberized, modified asphalt adhesive, blended with the highest quality bitumen.

**USES:** For application of mop grade SBS modified bitumen membrane sheets in lieu of mopping asphalt.

An excellent product for filling pitch pans and sealing penetration flashings on SBS roof membranes.

**Torch grade SBS modified bitumen membranes and APP modified bitumen membranes cannot be installed with this product.**

It is highly recommended to aluminum coat or embed roofing granules in the exposed adhesive for UV protection.

## PMA-2000

### POLYMER MODIFIED FLASHING MASTIC All Weather, Trowel Grade

PMA-2000 is a fibrated, heavy bodied, SBS rubberized, modified asphalt adhesive, blended with the highest quality bitumen.

**USES:** For application of mop grade SBS modified bitumen membranes and flashing sheets in lieu of PMA 186.

An excellent product for filling pitch pans and sealing penetration flashings on SBS roof membranes.

**Torch grade SBS modified bitumen membranes and APP modified bitumen membranes cannot be installed with this product.**

It is highly recommended to aluminum coat or embed roofing granules in the exposed adhesive for UV protection.

## INSTALLATION

The adhesive should be applied using a notched squeegee, brush or trowel, following the guidelines and application rates set forth in BITEC technical publications relative to cold adhesive application.

**Special care should be taken not to over-apply the adhesive. Over-application can cause degradation of the membrane.**

**Positive drainage should always be provided in order to prevent ponding water.**

**Never install more than one ply of membrane in adhesive. Multi-ply application is not recommended.**

A typical system would be composed of a nailed UL Listed G2 fiberglass reinforced base sheet, with the adhesive applied BITEC cap sheet installed as the finished surface.

**DANGER** - Keep out of the Reach of children and pets. Combustible material. Product is for commercial or industrial use. Harmful or fatal if swallowed. Contains petroleum mineral spirits.

If swallowed, do not induce vomiting. Call physician or poison control center immediately. For contact with skin, wash with soap and water.

Do not use solvent or mineral spirits to clean hands. For eye contact, flush eyes with copious amount of water and seek medical attention immediately.

This material is combustible. Keep away from heat source, fire or flame. Store materials in original containers. Do not use this container for anything other than its intended use.

Dispose of empty container as dictated by local code. Close container after each use. Avoid breathing mist or vapor. Use in well ventilated area.

For warranty information governing cold adhesive applied membrane products, contact BITEC's Technical Services Department.



	PMA-186	PMA-2000
Nominal Weight	8.25 lb. / gal.	8.5 lb. / gal
SBS Rubber	8% by solids	7.5% by solids
Cure Time	Tacks in 20 min., Dries in 2-5 days. Cures within 2 weeks, forming elastic bond.	
Application Rate	67 sq. ft./gal. or 1.5 gal./100 sq. ft.	1/8" Thick, 20 sq. ft. / gal. or 5 gal./100 sq. ft.

Exceeds all parameters of ASTM D 3019 and SCC 153.