

# Self-Adhering Mod Bit



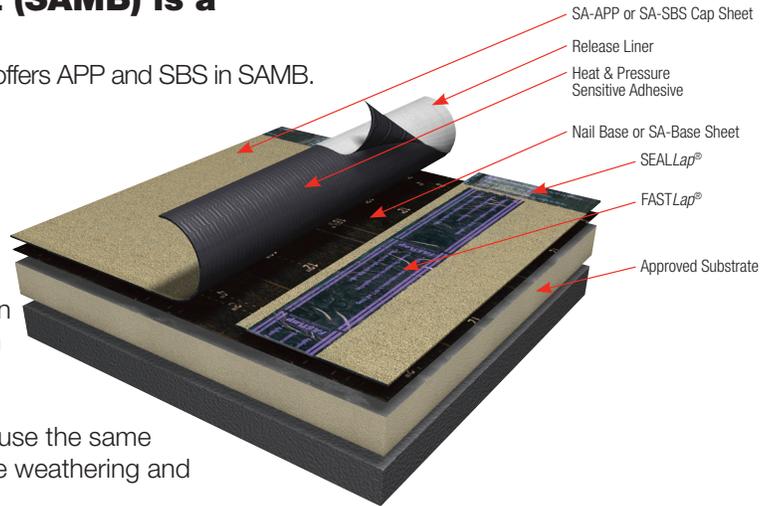
## Mule-Hide Self-Adhering Mod Bit (SAMB) is a superior product in the industry:

- Only our “dual compound” adhesive technology offers APP and SBS in SAMB.
- 12 color options
- Material and system warranties available.

### What does “dual compound” adhesive technology mean?

Mule-Hide SAMB has a different product on the bottom than on the top. Why is this important?

- “Dual compound” technology is the application of a sticky adhesive compound on the bottom while providing a true APP or SBS weathering surface on the top.
- “Single compound” brands are SBS only and use the same compound on both sides that acts as both the weathering and adhesive surfaces.
- The SBS used on “single compound” sheets has to be modified to make it sticky, reducing high-temperature weathering resistance.
- “Dual compound” technology allows Mule-Hide SAMB to have dedicated adhesive on the bottom layer and true APP or SBS weathering surface



### When do I use APP and when do I use SBS?

APP membranes perform better than SBS membranes in higher temperatures. Mule-Hide APP-Cap Sheets should be installed in hotter (southern) climates where average temperatures are higher. SBS membranes have better flexibility in colder temperatures than APP membranes. Mule-Hide SBS-Cap Sheets should be installed in cooler (northern) climates where winter average temperatures are lower.

### What does a heat and pressure-activated adhesive mean?

Mule-Hide SAMB has a heat and pressure-activated adhesive. What does that mean? The product is rolled to get initial tack, and then the heat from the sun over the next 48 hours fully activates the adhesive.

### Mule-Hide SA-CAP sheets have a FASTLap®

Mule-Hide FASTLap®, a 6” granule-free, selvage end lap on each roll, speeds installation and provides a better end lap seam.

- The granule-free end lap allows installation without modified adhesive.
- Only “dual compound” adhesive technology offers this patented time and money saving feature.

### Mule-Hide SA-CAP sheets have a SEALLap®?

1. SEALLap® is a factory-applied adhesive on the selvage edge and end laps that provides an instant bond in roll-to-roll seaming.
2. SEALLap® seams provide an immediate watertight seal and are especially valuable in low temperature conditions.

### What equipment is needed to roll the seams?

- Two options:
1. 2” neoprene hand roller
  2. 75 lb. drum/floor/linoleum roller.

### Laps on granulated surfaces can be completed with heat gun, eliminating need for Mod Bit Adhesive and Granules. How does the use of a heat gun save money?

1. Mod Bit adhesive is not needed – less labor to utilize a heat gun.
2. Cleaner process and no need to worry about adhesive waste.

## Self-Adhering Mod Bit

### Why **DISTRIBUTORS** will value Mule-Hide SAMB:

- Exclusivity of Mule-Hide Self-Adhering Modified Bitumen means contractors can only buy from ABC branches
- Their low-slope contractors enjoy easy, safe, clean installation and it's easily cross-sold to steep-slope roofing contractors
- The most color options in the market
- \$200 flat fee for freight with 24-pallet purchase

### Why **CONTRACTORS** will value Mule-Hide SAMB:

- Easy to install — no torches or kettles needed
- Roll sizes are conducive to portability in markets where roof access is limited
- Lower labor and insurance costs
- Nationwide availability at ABC Supply
- 12 color options
- True APP or SBS weathering surface provides superior performance over competition
- SA-APP Cap Sheet outperforms competition in warmer climates
- Project staging - SA-Base Sheet can be left exposed for up to 90 days, providing an opportunity to “dry in” the roof and apply the Cap Sheet after other trades are finished
- FASTLap® granule-free end laps speed installation
- SEALLap® provides an instant watertight bond
- Seaming over granular surfaces can be done with hot-air welding, which is cleaner and less expensive than using mod bit adhesive and granules
- Up to 20-year system warranties available for commercial projects and 20-year material warranties available for residences

### Why **ARCHITECTS** will value Mule-Hide Self-Adhering Modified Bitumen:

- Meets or exceeds the same ASTM standards as traditional mod bit
- Insurance and environmentally friendly modified bitumen solution
- 12 color options
- True APP or SBS weathering surface provides superior performance
- SA-APP Cap Sheet outperforms competition in warmer climates
- Project staging - SA-Base Sheet can be left exposed for up to 90 days, providing an opportunity to “dry in” the roof and apply the Cap Sheet after other trades are finished
- Up to 20-year system warranties available

### Why **BUILDING OWNERS** will value Mule-Hide Self-Adhering Modified Bitumen:

- Easy to install, no torches or kettles used – minimal disruption to operations and occupants
- Insurance and environmentally friendly modified bitumen solution – no fumes and no flames
- 12 color options
- True APP or SBS weathering surface provides superior performance
- SA-APP Cap Sheet outperforms competition in warmer climates
- Project staging - SA-Base Sheet can be left exposed for up to 90 days, providing an opportunity to “dry in” the roof and apply the Cap Sheet after other trades are finished
- Up to 20-year system warranties available for commercial projects and 20-year material warranties available for residences



# Self-Adhering Mod Bit Membranes

## Nail Base

SBS Fiberglass reinforced with sanded back and polyolefin film surface, printed with lay lines

- Must be used when applying system over non-acceptable substrates.
- Specifically designed to be mechanically attached
- Two standard patterns: I-60 and I-90
- Can be torched or mopped to
- Not watertight when installed, cannot be left exposed
- Not considered a waterproofing layer in the system
- Available in 200 sq ft (2-square) rolls



Acceptable Substrate Surface	Not Acceptable
New Plywood or OSB <i>(Rough Side Up)</i>	Perlite
Old Plywood or OSB <i>(Primed with 121 Asphalt Primer)</i>	Expanded polystyrene
DenDeck Prime <i>(Primed with 121 Asphalt Primer)</i>	Extruded polystyrene
Concrete <i>(Primed with 121 Asphalt Primer)</i>	Lightweight Insulated Concrete
Flat Metal <i>(Primed with 121 Asphalt Primer)</i>	Sand Surface Base Sheet
Mule-Hide Poly ISO	15-lb or 30-lb Base Sheet
Structodek HD with Primed Red Coating or 6 Sided Wood Fiber	Foil Faced Insulation
Nail Base	Uncoated Fiber Board

*Reference SAMB Application Guidelines for additional information*

## SA-Base Sheet & SA-Base Sheet (FR) [FR = Fire Retardant]

Fiberglass reinforced with self-adhering compound on bottom and SBS top surface featuring polyolefin film printed with lay lines

- Split release liner on bottom adhesive compound
- Can be torched or mopped to
- Watertight upon installation
- Can be left exposed for up to 90 days
- SA-Base (FR) must be used when UL Class A ratings are required
- SA-Base and SA-Base (FR) layers are considered waterproofing layers in the system
- Packaging designed to protect product from heat and simplify handling
- Box neatly breaks down and lays flat for easy disposal
- Available in 200 sq-ft (2-square) rolls



## SA-SBS Cap Sheet and SA-SBS Cap Sheet (FR) (Cooler "Northern" Climates) SA-APP Cap Sheet and SA-APP Cap Sheet (FR) (Hotter "Southern" Climates)

Polyester reinforced sheet with self-adhering adhesive compound on bottom covered with a split release liner

- Top surface is true SBS modified bitumen with granular surfacing available in 12 colors
- 3" selvage edge on one side with SEALLap® adhesive
- 6" FASTLap® granule-free end lap with SEALLap® adhesive
- SA-SBS Cap Sheet (FR) must be used when UL Class A ratings are required
- Packaging designed to protect product from heat and simplify handling
- Box neatly breaks down and lays flat for easy disposal
- Available in 100 sq ft (1-square) rolls





# Self-Adhering Mod Bit

## Accessories



### 121 Asphalt Primer

- ASTM D41 compliant primer
- Used to improve adhesion on horizontal and vertical surfaces
- Available in 14-oz spray can or 5-gal pail



### 271 Mod Bit Sealant

- Tube version of 421 used at terminations on metal, soil pipes, etc.
- Critical to install a bead of 271 at the “dog ears” on all end laps
- Available in 10.3-oz tubes



### 421 Mod Bit Flashing Adhesive Trowel Grade

- Used when a ply is installed over the granulated surface of cap sheet and heat welding is not used to seal the lap
- Available in 3 and 5-gal pails



### Mod Bit Granules

- Dry granules in each color adhere to exposed mod bit adhesive or sealant to maintain a consistent color across the roof
- Sold in 4.5-gal pails

## APPLICATION METHODS



Trowel



Rubber  
Glove



Roofing  
Applicator



Roller



Aerosol  
Spray



# Self-Adhering Mod Bit

**Common Misconception:** “It’s too expensive vs. the competition.”

**Answer:** Mule-Hide Cap Sheet pricing might be higher than the competition; however its FASTLap® does not require the contractor to use mod bit adhesive and granules on the end lap. In addition, contractors can hot-air weld any lap over a granulated surface eliminating the need for pails of mod bit adhesive and granules on the job, which lowers the installed cost of Mule-Hide SAMB.

The Mule-Hide FASTLap® eliminates the need for the contractor to use mod bit adhesive to seal the end lap. Contractors installing competing products must use mod bit sealant and granules at end laps because the ends of the rolls are not granule free. Determine the savings to the contractor when 421 Mod Bit Adhesive is not needed:

## Mod Bit Adhesive Savings on 3-Gallon Pails of 421

Material Comparison					
Coverage Rate	Cost per pail	Sq. Ft. per Pail	Sq. Ft. at Endlap	Cost of Mod Bit Adhesive per Sq. Ft.	Cost of Mod Bit Adhesive per Endlap
8 Gal/100 Sq. Ft. of 1/8" thick layer	\$37.50	37.50	1.64	\$1.00	\$1.64
<i>The above calculation shows the need to use mod bit sealant on the end laps will add \$1.64 per one square roll to the price of competitor products. The value of Mule-Hide SAMB increases even more when the ability to hot-air weld laps over granulated surfaces is added to the overall cost. The cost per square foot to use 421 Mod Bit Adhesive is \$1.00, which equates to approximately \$0.50 per linear foot of 6" seam.</i>					

Labor Comparison	
Competitors' Lap on Granulated Surface	Mule-Hide Hot-Air Welded Seam on Granulated Surface
Grab pail of mod bit adhesive and open it	✓ Lay top sheet onto bottom sheet
Apply 1/8" layer of mod bit adhesive at lap	✓ Roll Seam while hot-air welding
Put lid on pail of mod bit adhesive	
✓ Lay top sheet onto bottom sheet	
✓ Roll seam	
Grab pail of mod bit granules and open it	
Apply mod bit granules into exposed mod bit adhesive	
Put lid on pail of mod bit granules	

- Steps consistent with both methods cancel each other
- The labor steps needed to seal a lap over a granulated surface takes much longer in competitor systems
- Take into account lost product left in the pails, overall messiness of the job, and disposal costs of contaminated empty pails

## Core Fact: FASTLap® and Hot-Air Welding Saves the Contractor Money.

Use the calculator below to show the effect of using hot-air welded seams instead of mod bit adhesive on laps over granulated surfaces.

Size of Job in Squares	Cost Difference per 1 sq Roll of MH SA Cap	# of FASTLaps on the Job	Lft. of Base Flashings on Job	True Cost Difference Using MH Self Adhering Cap Sheet	Results
20	\$1.00	20	50	-\$37.80	Material cost less with Mule-Hide
20	\$2.00	20	50	-\$17.80	Material cost less with Mule-Hide
20	\$3.00	20	50	\$2.20	Material cost nearly the same

*The example above can be used when MH SA-Cap Sheet cost more than the competition. The cost difference is actually lower when the more time consuming labor steps are added to the overall cost. Mule-Hide SAMB labor savings easily offsets the higher material costs versus the competition and leaves a cleaner looking job.*



# Self-Adhering Mod Bit

**Common Misconception:** “All self-adhering modified bitumen membranes are the same.”

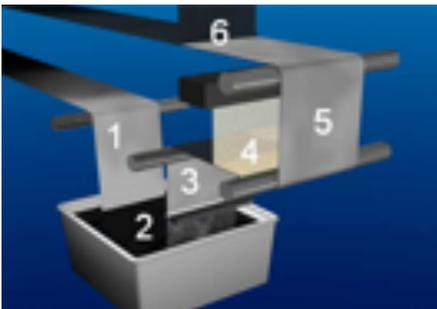
**Answer:** Not True. Mule-Hide SAMB Cap Sheets are manufactured with “dual compound” technology featuring an aggressive adhesive layer on the bottom of the sheet while providing a true SBS or APP modified bitumen on the top weathering surface.



1. Reinforced Sheet
2. Liquid modified bitumen altered to be "sticky"
3. 2-sided coated sheet

### Single Compound Technology

Competitor products are manufactured with “single compound” technology, which uses the same material for the adhesive layer on the bottom as the weathering surface on top. To make a traditional SBS modified bitumen work as an adhesive; it has to be “softened” to make it sticky. The softening process changes the properties of the SBS modified bitumen and tends to make it less resistant to higher temperatures. In other words, it becomes softer at a lower temperature and scuffs easily as the rooftop temperatures increase.



1. Reinforcement Sheet
2. Traditional modified bitumen (APP or SBS)
3. Product scraped from back side of reinforcement
4. Granules applied into modified bitumen
5. Sheet is inverted
6. Second adhesive compound applied to back of sheet

### Dual Compound Technology

Mule-Hide “dual compound” technology allows for the application of a true pressure and heat-activated adhesive layer to the back side of its sheets. It is a true adhesive and not just SBS modified bitumen altered to become sticky. The top weathering surface is either traditional SBS modified bitumen that has better low-temperature flexibility or traditional APP modified bitumen that has excellent high-temperature weatherability.

**Core Fact: Mule-Hide SA-APP Cap Sheet outperforms competitors’ products in warmer climates and will not scuff as easily in warmer temperatures.**

Mule-Hide SAMB is a superior product in the market. It offers the most extensive color selection in the industry. Mule-Hide enjoys a large share of the self-adhering modified market because of its nationwide footprint through ABC Supply.



# Self-Adhering Mod Bit

**Common Misconception:** “Why do I need to roll it? The roller is too heavy to get on the roof.”

**Answer:** Mule-Hide SAMB adhesive compound is heat and pressure-sensitive, which means that it takes pressure to create the initial tack and then the bond becomes stronger as it is exposed to heat. Mule-Hide SAMB is not unique with this requirement. All other SAMB manufacturers require rolling. The 75-lb flooring roller recommended by Mule-Hide weighs less than one roll of Nail Base, SA Base or SA Cap Sheet.

### Core Fact:

**Each layer of Mule-Hide SAMB membranes must be rolled to ensure proper adhesion.**

**Common Misconception:** “I can install self-adhering modified bitumen all year round.”

**Answer:** Wrong. Colder temperatures affect the tackiness of self-adhering modified bitumen membranes causing them to be poorly adhered to the substrate. As a general rule, our competitor's have set the low-temperature threshold at 50°F and rising. Mule-Hide requires temperatures to be 40°F and rising for 48 consecutive hours. Mule-Hide requires the temperatures be above 40°F for 48 hours in order for heat to improve the adhesive bond to the substrate.

**Mule-Hide addresses its temperature requirements in Technical Bulletin #07-1101.**

**Tech Bulletin 07-1101** - October 2018

SAMB (Self-Adhering Modified Bitumen) - In order to perform properly, Mule-Hide SAMB materials require a minimum application temperature of 40°F and rising for 48 continuous hours. This applies to the roofing materials and approved substrate. During installation, the membrane must be promptly rolled with a minimum 75# roller. Failure to abide by these requirements may result in poor adhesion or cracking issues. During periods of colder weather, the Mule-Hide SAMB materials should always be stored at room temperature (60°F to 80°F) until just prior to use. Materials that are not stored at room temperature (or not used within 4 hours) should be restored to room temperature prior to use.

**Core Fact: Mule-Hide Self-Adhering Modified Bitumen must be installed when SUBSTRATE temperatures are 40°F and rising for 48 consecutive hours.**



# Self-Adhering Mod Bit

## **Common Misconception: “I can’t adhere direct to the deck.”**

**Answer:** Yes, Mule-Hide allows the contractor to stick SAMB directly to the roof deck if the deck is: old plywood or OSB primed, new plywood or new OSB rough side up. Note: the space below the deck must be properly ventilated.

Even though Mule-Hide approves of direct-to-deck adhesion (except in Florida), it is recommended that a nail base be installed first for the following reasons:

- Direct-to-deck adhesion can lead to the telegraphing of the joints in the deck through the membrane. This creates a “picture framing” appearance when viewed from above which may be unsuitable for a building owner with windows overlooking the roof area.
- Due to the aggressive adhesive compound on the sheets, the adhesion to the deck may be strong enough to damage the roof deck, potentially requiring deck replacement if the roof has to be removed in the future.

## **Common Misconception: “I can’t get a 20-year warranty.”**

**Answer:** Yes, Mule-Hide offers 10, 12, 15 and 20-year warranties on SAMB membranes. Mule-Hide offers both Membrane-Only Warranties and System Warranties. See chart below for basic warranty requirements.

<b>Membrane-Only Warranties: Both Residential &amp; Commercial Projects</b>		
<b>Warranty</b>	<b>Layers of Material</b>	<b>Fees</b>
12-Year	1 layer SA-Cap sheet on field	No
	1 layer of SA-Cap sheet for flashings	
15-Year	1 layer SA-Base	No
	1 layer SA-Cap on field	
	1 layer SA-Cap for flashings	
20-Year	2 layers SA-Base	No
	1 layer SA-Cap on field	
	1 layer SA-Base with 1 layer SA-Cap for flashings	
<b>System Warranties: Commercial Projects Only</b>		
<b>Warranty</b>	<b>Layers of Material</b>	<b>Fees</b>
10-Year	1 layer SA-Cap sheet on field	Yes
	1 layer of SA-Cap sheet for flashings	
12-Year	1 layer SA-Cap sheet on field	Yes
	1 layer of SA-Cap sheet for flashings	
15-Year	1 layer SA-Base	Yes
	1 layer SA-Cap on field	
	1 layer SA-Cap for flashings	
20-Year	2 layers SA-Base	Yes
	1 layer SA-Cap on field	
	1 layer SA-Base with 1 layer SA-Cap for flashings	