



## Helix<sup>®</sup> Max Low-Rise Foam Adhesive

### Product Description

Helix<sup>®</sup> Max Low-Rise Adhesive is a low-rise, VOC-free, construction-grade, two-component polyurethane adhesive designed to bond Mule-Hide insulations and Fleece Back (TPO, PVC or PVC KEE) membranes to a variety of substrates.

### Packaging

Helix Max is packaged in cartridges, pressurized tanks, 5-gallon jugs, 15- and 50-gallon drums.

1. Cartridges are a twin-pack consisting of one tube of Part A and one tube of Part B bound together. The cartridge is designed to fit most of the dispensing guns currently available in the market. Cartridges are sold in cartons. Each carton contains four cartridges and six cartridge static mix tips.
2. Tank packaging consists of two tanks, one labeled Part A and one labeled Part B. Each tank is supplied in a separate box.

#### Part A box includes:

- Gun assembly (a 25' dual hose with attached spray gun)
- Petroleum jelly packet
- Wrench
- 10 tank static mix tips
- 10 tip extensions
- Instruction sheet

The **Part B box** only contains the Part B tank. Gun assemblies and additional tank static mix tips may be purchased separately.

3. The 5-gallon jugs, 15- and 50-gallon drums are dispensed by roofing carts. Each kit contains a Part A and Part B. Static mix tips are sold separately.





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### Application

Helix Max is a two-component, low-rise, construction grade, polyurethane foam adhesive designed to adhere to approved roof insulations, thermal barriers, cover boards and fleece backed single-ply membranes to acceptable substrates. Helix Max is VOC, CFC, HCFC and solvent-free. Helix Max is applied in three different methods:

Container Size	Max Coverage Rates (sq. ft/set)				
	Spray	Splatter (50%)	4" O.C.	6" O.C.	12" O.C.
Dual Cartridge Carton	N/A	N/A	165	250	500
Dual Tanks	N/A	2,000*	1,000	1,500	3,000
5-Gallon Jug	1,000	N/A	900	1,250	1,750
15-Gallon Drum	3,000	N/A	3,000	4,500	7,500
50-Gallon Drum	10,000	N/A	10,000	15,000	25,000

\*membrane attachment only

### Substrate Compatibility

Insulation/Underlayments	Roof Decks	Existing Roofing Materials
Poly ISO 1 & 2	Concrete	Smooth BUR w/exceptions
StructoDek High Density	Cellular Lt.Wt. Concrete w/exceptions	Gravel BUR w/exceptions
Expanded Polystyrene (EPS) w/exceptions	NVS Lt.Wt. Concrete w/exceptions	Mineral Cap Sheet
Expanded Polystyrene (XPS) w/exceptions	Gypsum	Granular Modified Bitumen
DensDeck	Cementitious Wood Fiber	Smooth Modified Bitumen
Securock	Plywood/OSB	Coal Tar Pitch w/exceptions
Oriented Strand Board	Painted Steel	Aged EPDM, Hypalon, TPO w/exceptions
Poly ISO 1 HD	Galvanized Steel w/exceptions	Unexposed (Shiny) Asphalt w/exceptions
	Acoustical Steel w/exceptions	
	Wood Plank	

### Unapproved Substrates / Surfaces

Insulation/Underlayments		Existing Roofing Materials	
New Spray Foam	May be considered on a job-to-job basis. Contact Mule-Hide Technical Department prior to bidding.	Aluminum-Coated BUR	Aluminum coating must be removed prior to application. Adhesion tests are required.
Scarified SPF	May be considered on a job-to-job basis. Contact Mule-Hide Technical Department prior to bidding.	Acrylic-Coated SPF	May be considered on a job-to-job basis. Contact Mule-Hide Technical Department prior to bidding.
		Silicone-Coated SPF	May be considered on a job-to-job basis. Contact Mule-Hide Technical Department prior to bidding.



## *Helix<sup>®</sup> Max* *Low-Rise Foam Adhesive*

### **Why Contractors value Mule-Hide Helix Max Low-Rise Foam Adhesive**

- Provides an improved product with additional features and benefits
- Greater elongation and tensile strength
- Able to be applied in colder temperatures
- Provides fleece back roofing systems applied with full spray application better hail resistance
- The addition of 5-gallon jugs provides the best packaging option available for use with low-pressure equipment

### **Why Architects value Mule-Hide Helix Max Low-Rise Foam Adhesive**

- Provides an improved product with added features and benefits
- Greater elongation and tensile strength
- Provides fleece back roofing systems applied with full spray application better hail resistance
- Able to be applied in colder temperatures
- Design solutions for high uplift requirements
- Provides a non-penetrating attachment method
- Provides a non-thermal bridging option for roof attachment

### **Why Building Owners value Mule-Hide Helix Max Low-Rise Foam Adhesive**

- Provides fleece back roofing systems applied with full spray application better hail resistance
- Able to be applied in colder temperatures
- Provides a non-penetrating attachment method
- Provides a non-thermal bridging option for roof attachment
- Low-VOC reduces odors during application





**1. Does Helix Max Adhesive look different than the Helix?**

Helix Max is blue. Helix was gray.

**2. How cold can it be when using Helix Max?**

The substrate and ambient temperature must be above 25°F when using Helix Max. If temperatures are below 50°F, the adhesive must be kept above 70°F during application. Heated tank blankets (not band heaters) are recommended to keep the adhesive warm during application at 50°F or lower.

**3. Will MHP provide the same rated systems with Helix Max that it had with Helix?**

Mule-Hide will have more extensive listings of assemblies with UL and FM.

**4. Will Mule-Hide still offer Helix?**

No. Current inventory will be depleted, and the Helix product will be discontinued.

**5. Are full spray and splatter pattern available with Helix Max?**

Yes, but it depends on the delivery system. Full spray application is possible using 5-gallon jugs, 15- and 50-gallon drums if the dispensing equipment has high-pressure capabilities. Splatter pattern application is possible when using Tanks only for approved membrane attachment.

**6. What is open time?**

When Helix Max is dispensed, it should be allowed to rise for approximately 1.5-2 minutes until it becomes stringy when pinched between gloved fingers. Once the adhesive has “string,” open time begins and the insulation or membrane can then be set in the adhesive. The open time is approximately 3-3.5 minutes. Open time expires once the adhesive skins over on the top and is no longer stringy.

**7. Is the open time the same as with Helix?**

Helix Max has a longer open time than Helix. This enables the contractor to have more time to set the boards and membrane in the adhesive before it loses string, or tack.

**8. Does all of the asphalt on the deck need to be removed prior to using Helix Max?**

Helix Max does not stick to new, or previously unexposed, asphalt that has a shiny appearance. Whenever shiny asphalt is encountered, the asphalt must be primed with AeroWeb Low-VOC Adhesive prior to the installation of Helix Max.

**9. How much more expensive is it to attach insulation with Helix Max versus fasteners?**

As a general rule, material costs to use Helix Max is around 5 to 6 times more expensive than using screws when one layer of insulation is installed. Unlike mechanically fastening insulation where only the top layer is fastened, each individual layer must be adhered when using Helix Max. However, some of the major benefits to using Helix Max Adhesive can greatly decrease costs in other areas of the project, such as:

- Reduced labor compared to standard fastening into concrete, gypsum, cementitious wood fiber (Tectum), and lightweight concrete roof decks

**10. Does it matter what kind of tips are used on the gun or cartridge?**

Yes, absolutely! Each manufacturer designs mixing tips to create the desired 1-to-1 ratio based on the product properties. Helix Max mixing tips must be used with the Helix Max Gun Assembly or Cartridges. Failure to use Helix Max mixing tips results in off-ratio mixing and the foam will not properly rise.



**11. Can I use my leftover Helix tips?**

Original Helix tips do not work with Helix Max.

**12. What membranes can be adhered with Helix Max Adhesive?**

Only fleece back membranes can be adhered using Helix Max. Currently, Mule-Hide offers TPO, PVC, and PVC KEE HP in Fleece Back configurations.

**13. Can Helix Max adhere directly to an existing PVC single ply membrane?**

No. PVC is not an approved substrate for Helix Max. In addition, Helix Max is not approved for attachment to existing aluminized, acrylic or silicone coatings.

**14. Are there restrictions for insulation attachment?**

Yes. First, there is a maximum 4' x 4' size restriction when installing any insulation board in foam adhesive because they can warp and cup. Heavier cover boards, such as DensDeck Prime and Securock can be installed in 4' x 8' sheets. Another restriction is that the splatter pattern when using tanks is not approved for insulation attachment.

**15. What is the shelf life of Helix Max?**

Helix Max has a shelf life of approximately 12 months when stored in an upright position at 50°-90°F in its original unopened container. Storage temperatures above the recommended range shorten shelf life. Do not store in direct sunlight or temperatures higher than 90°F, such as using it for tarp weight on a roof. Helix Max should be stored in a covered, secure location. Keep from freezing. Product stored below 50°F must be given sufficient time (minimum 24 hours) for the adhesive to warm up prior to use.

**16. Who does adhesion tests?**

Adhesion tests are scheduled through your Mule-Hide Territory Manager.

**17. How can Helix Max provide increased puncture resistance in Fleece Back systems?**

When installed in a full spray application, Helix Max provides 33-50% better puncture resistance.

**18. Can the R-Value of the roofing system increase with Helix Max?**

A continuous layer (full spray) of Helix Max can increase the R-value .20 to .50.

**19. Does Mule-Hide sell dispensing guns?**

No, dispensing guns may be purchased through ABC Catalog.

**20. Helix requires ballasting of the boards, is this required with Helix Max?**

Helix Max allows for "walking in" boards then rolling them in with a 150# roller. Ballasting boards may be beneficial during installations in windy conditions, however either application method is acceptable to Mule-Hide.