



# Technical Bulletin

## No. 1101

### Mule-Hide Membranes and Adhesives - Cold Weather Installation

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During periods of cold weather, special storage and application methods must be used to facilitate the installation of our roofing materials. For best results, store roofing materials between 60°F and 80°F prior to application. Ensure that products are at 60°F to 80°F during installation. Rotate products as required, and restore cold products to room temperature prior to use. Cold products may take 1 or more days to properly warm.

Listed below are some tips for installing Mule-Hide membranes during periods of cold weather (40°F or less). As a rule, roofing materials become stiffer and more difficult to work with as temperatures decrease. Proper storage and installation of all your roofing materials is crucial to the successful outcome of your project.

**EPDM** – EPDM membrane is available in large sheet sizes that are folded. During periods of cold weather, these folded sheets are more difficult to relax and install. Mule-Hide recommends the use of smaller, non-folded sheets for installation during cold weather. Allow extra time for the sheet to relax during colder weather.

EPDM flashing products may require supplemental warming from a heat gun. Be careful to keep the heat gun away from flammable materials such as cleaners, tape primers and adhesives.

**TPO & PVC** – Remove the outer wrapping and un-roll the membrane. Flip the membrane over so that the back side is up, facing the sunlight. This will allow the darker, back side of the membrane to absorb warmth from the sun while relaxing. Only un-wrap as much material as will be used during that day. Allow extra time for the sheet to relax.

Welding techniques and parameters must also be adjusted for cold weather applications. In general, welding speeds need to be decreased. It is imperative that test welds be conducted at start up and after the automatic welder has been shut down to assure that a proper weld is being made. It is also important to conduct test welds with hand welders also, due to the slower speeds needed to affect a proper weld.

**SAMB (Self Adhering Modified Bitumen)** - In order to perform properly, SAMB membranes require a minimum *application* temperature of 40°F and rising for 48 continuous hours. SAMB membranes are required to be at room temperature (60°F to 80°F) during application. 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, SAMB rolls must be stored on end in a warm environment so the material is at room temperature (60°F to 80°F) until just prior to use (make take 1 or more days to properly warm cold materials). Materials not at room temperature (or not used within 4 hours) must be restored to room temperature prior to use.

**APP TORCH** - For best results, avoid installing APP TORCH membranes at temperatures lower than 40°F to 45°F. Where work is unavoidable at such temperatures, extra care must be taken to ensure that cracking is avoided when un-rolling the membrane and that adequate bonding is

achieved during installation. Maintain rolls at room temperature (60°F to 80°F) at the time of application (cold material may take 1 or more days to be properly restored to room temperature). Store rolls in heated storage and rotate stock to avoid working with cold material. Accessory items (primer, sealants, and adhesives) must also be maintained at 60°F to 80°F prior to use. Rotate stock to avoid working with cold materials.

## **Adhesives & Sealants**

### Acrylic Water Based Bonding Adhesive, Aqua Base 120 & HydroBond

Water based adhesives must not be allowed to freeze either during storage or application. These adhesives must be stored in original unopened containers in a warm environment so that the product temperature is between 60°F and 90°F prior to application. Cold materials may take 1 or more days to be warmed to proper temperatures. In general, these products must be installed when temperatures are 45°F and above and must not be allowed to freeze within a minimum of 48 hours of application (72 hours for HydroBond). Once subjected to freezing temperatures the product will not perform and must be disposed of. Consult the appropriate Product Data Sheets for specific information on the adhesive being installed.

### Mule-Hide Bonding Adhesive (EPDM), Mule-Hide TPO Bonding Adhesive, Mule-Hide PVC Bonding Adhesive, Low-VOC Bonding Adhesive, Low-VOC PVC Bonding Adhesive, Low-VOC AeroWeb, Bonding Adhesive 1168 (CA only)

Solvent based adhesive and sealants must be stored in original unopened containers at temperatures between 60°F and 80°F until material reaches roof temperature (may take 1 or more days for cold materials to be warmed to proper temperature). Products stored at cold temperatures and then restored to room temperatures may experience separation of solvents. Always remix products thoroughly prior to use and re-mix a minimum of twice a day.

Working in low temperatures will also result in longer drying times for solvent based products. Failure to allow the products to properly flash off will result in solvent blistering of the membrane. Broom or roll the membrane immediately after bonding the sheet. If blisters occur, allow solvent to dissipate naturally for 4 to 5 days and then re-broom the membrane.

In addition to extended drying times, there is an increased likelihood of condensation forming on the surface of the adhesive. If condensation forms, the surfaces cannot be mated and work must stop until conditions improve. Wait until conditions improve and allow the adhesive to dry completely. Make sure the surface is completely dry before reapplying another coat of adhesive or primer.

### Mule-Hide Helix Max Low-Rise Adhesive

Apply adhesive when substrate and ambient temperature is above 25°F. When using adhesive in temperatures below 60°F, the adhesive must be kept warm. **Adhesive temperature is very important. Containers and adhesive must be above 70°F when applied. Initial rise and set time will vary with weather conditions.** The Helix Low-Rise Adhesive initial rise time and insulation placement will vary depending on environmental conditions (temperature and humidity). Adhesive will react quicker in hot, moist environments and slower in cool, dry environments.

Any information given on this Technical Bulletin is subject to change without notice. Please visit our website at [www.mulehide.com](http://www.mulehide.com) or contact Mule-Hide Products at (800) 786-1492 for questions or additional information.