

# Technical Guide

*"The name trusted in roofing since 1906"*



## How to apply Acrylic Water Base Bonding Adhesive

### Description

Mule-Hide Acrylic Water Base Bonding Adhesive is an acrylic latex-based adhesive that is shipped in white containers, is white in color and becomes clear when dry. This adhesive is used to bond Mule-Hide EPDM membranes to approved **porous** substrates as a single-side adhesive. Use of this adhesive allows the EPDM membrane to be repositioned after making initial contact with the adhesive.

Approved substrates include high density wood fiberboard, plywood, oriented strand board, wood plank, Dens-Deck Prime or Securock Gypsum-Fiber Roof Board.

**Acrylic Water Based Bonding Adhesive cannot be applied directly over Polyisocyanurate**

### Precautions

Acrylic water base bonding adhesive cannot be used:

On slopes exceeding 2:12 (2" per foot)

Over Polyisocyanurate roof insulation

When temperatures are lower than 45°F (do not allow adhesive to freeze during storage)

When temperatures will fall below 45°F after application (must be >45°F for 48 hours after application)

### Application

1. A single-side application is when the adhesive is only applied to the substrate. The membrane is then immediately rolled into the wet adhesive. Mule-Hide does not recommend applying the adhesive to the membrane in a single-side application as the quantity of adhesive applied may not be sufficient to properly bond to the substrate.
2. Unroll the Mule-Hide EPDM Membrane and position without stretching. Large sheets may be moved into final position by encapsulating air under the membrane and floating it into place. Allow the membrane to relax at least 30 minutes prior to installation. Inspect and remove any damaged membrane. Lap sheets a minimum of 4" to allow for a proper field splice. Membrane overlaps shall be shingled with the flow of water. Membrane should run perpendicular to the direction of steel deck flutes and orientation of wood decks where possible.
3. After several sheets of EPDM membrane have been positioned, begin by folding back one half of the first sheet's length to expose the bottom side of the sheet. Smooth out the sheet to remove any wrinkles.
4. Thoroughly stir the adhesive to a uniform consistency before application.
5. Apply a smooth, even coating of Mule-Hide Water Base Bonding Adhesive to the substrate that will be covered by the first sheet. The coverage rate is approximately 125 to 160 square feet per gallon. The coverage rate will vary with the degree of porosity of the surface being covered.
6. It is recommended that the adhesive be applied to the substrate using a 9" paint roller with a minimum ½" nap solvent-resistant paint roller as it will easily fit into the 5 gallon pails. If the adhesive is sprayed, the adhesive must be rolled with a paint roller immediately after spraying. If the adhesive begins to turn clear, it is too dry and shall require a second coat.
7. Do not apply adhesive in the seam area. Clean any adhesive from the seam area before it dries.
8. As the adhesive is being applied to the substrate, the membrane should immediately be rolled into the adhesive while the adhesive is still wet. If the adhesive begins to turn clear, it is too dry and requires a second coat before the membrane is rolled into it.

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9. If wrinkles develop while the membrane is rolled into the adhesive, you can gently lift and reposition the sheet as needed, taking care not to stretch the membrane.
10. Once the sheet has been rolled out, it must be broomed with a large nylon bristled push broom to promote 100% adhesion. Broom the entire surface using sufficient pressure to work out any bubbles or wrinkles.
11. Do not attempt to work a large area as that may allow the adhesive to start drying before you can lay the membrane into it. The membrane must be laid into the adhesive while it is wet. If the adhesive starts to turn clear you must apply more adhesive before installing more membrane.
12. Periodically check your adhesive application rate by viewing the bottom side of the membrane. Immediately after brooming a sheet into place, gently lift a corner of the sheet to expose 1 to 2 feet of the back surface of the membrane. The back side of the membrane should have a uniform coating of adhesive. This indicates that a sufficient amount of adhesive was applied and the sheet has been rolled into the adhesive at the right time.
13. If you do not see a uniform coverage of adhesive on the back side of the membrane, then either:
  - 1) The adhesive was applied too lightly (more adhesive needed) to the substrate
  - 2) The adhesive was allowed to dry (turn clear) before the membrane was rolled into it

You will have to adjust your application technique (quantity of adhesive or exposure time). The porosity of the substrate or climatic conditions may require a heavier coat of adhesive be applied.

14. Install subsequent sheets in the same manner, overlapping the previous sheet a minimum of 4" for the field seam area. All sheets must be lapped in shingle fashion so that water flows over the seam and not against the seam.
15. After the membrane has been installed, it is normal for the EPDM to have a 'wrinkled' appearance. This will last for up to 48 hours while the adhesive cures. No action is needed. Do not attempt to broom the membrane after the initial brooming.

The information given on this PDS is subject to change without notice. Always check the Mule-Hide website at [www.mulehide.com](http://www.mulehide.com) for the latest information, changes and updates or contact Mule-Hide Products Company at 800-786-1492.