



SUMMARY SPECIFICATION

TPO Fleece Back & Fleece Back Plus FULLY ADHERED ROOFING SYSTEM

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This Summary Specification is a brief overview of Mule-Hide Product's specifications and requirements for a Fully Adhered Mule-Hide Reinforced TPO Fleece Back or Fleece Back Plus Roofing System and is intended for use as a submittal in a bid package. Specifier's and Mule-Hide Warranty Eligible Contractors must comply with Mule-Hide Product's specifications and requirements prior to design or bid.

Part 1 General

1.01 Description

The Mule-Hide Fully Adhered TPO Fleece Back Roofing System utilizes a (maximum) 12' wide, scrim reinforced Mule-Hide TPO Fleece Back membrane in thickness of 45 mil (FB-45), 60 mil (FB-60), or 80 mil (FB-80) bonded to a 55-mil polyester fleece backing. The Mule-Hide Fully Adhered TPO Fleece Back Plus Roofing System utilizes a (maximum) 12' wide, scrim reinforced Mule-Hide TPO Fleece Back membrane in thickness of 45 mil (FBP-45), 60 mil (FBP-60), or 80 mil (FBP-80) bonded to special 10 oz/yd² stain resistant, asphalt compatible, polyester fleece backing. Approved insulation is attached to the substrate with either Mule-Hide Insulation fasteners and plates or Mule-Hide Helix[®] Max low-rise foam adhesives. Fleece Back TPO membrane is bonded to the insulation with a Mule-Hide Helix[®] Max low-rise foam adhesive or Aqua Base 120 water base bonding adhesive. Fleece Base Plus TPO is bonded with Hot asphalt. The adjoining sheets are overlapped approximately 3" and seamed together with a min 2" wide heat weld.

1.02 Quality Assurance

- A. The roofing system must be installed by a Mule-Hide Warranty Eligible Applicator in accordance with installation guidelines and detail drawings as approved by Mule-Hide. Prior written approval from the Mule-Hide Warranty Department is required for all deviations from Mule-Hide's published specifications and details.
- B. Projects requesting a Labor and Material Warranty will be inspected by a Mule-Hide Representative to verify that Mule-Hide's installation and material requirements have been met.
- C. Mule-Hide roofing systems offer a variety of Underwriters Laboratories (UL), Factory Mutual (FM) and other ratings. Consult the appropriate approval guides and Mule-Hide Products for specific code approvals.

1.03 Submittals

- A. To ensure compliance with Mule-Hide's warranty requirements contact the Mule-Hide Warranty Department if any of the following conditions exist.

- 1. Wind speed warranty greater than 55 MPH.
- 2. Building height > 100'
- 3. Located in coastal or high wind zones.
- 4. Pressurized buildings
- 5. Cold Storage or Freezer Buildings
- 6. Membrane exposed to chemicals

- B. Submit a completed Warranty Application form to Mule-Hide prior to bidding. Also include fastener pullout testing results as required for non-standard substrates.

- C. All projects must have a Mule-Hide warranty application number assigned prior to inspection.

1.04 Product Delivery, Storage, and Handling

- A. Deliver materials to the job site in original, unopened containers, with the manufacturer's name, brand name and installation instructions.
- B. Store all materials in a dry, clean area protected from the elements, as per manufacturer's recommendations.

1.05 Job Conditions

- A. All existing wet or damaged roofing materials must be removed and replaced with new.
- B. All existing phenolic insulation and sprayed-in-place urethane roofs must be removed.
- C. The specifier must determine the use and placement of vapor retarders. Consult ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc.) and NRCA (National Roofing Contractors Association) publications.
- E. Coordinate work between all trades to avoid traffic over completed sections of roofing.

1.06 Warranty.

Fees are required for all Labor and Material (System) Warranties. System Warranties must be obtained through a Mule-Hide Warranty Eligible Applicator. All projects requesting a System Warranty must be inspected by a Mule-Hide Representative. Components of the roofing system must be supplied by Mule-Hide. Warranty covers only Mule-Hide supplied materials. Sample warranties are available upon request. Contact Mule-Hide Warranty Department for warranty requirements.

Part 2 Products

2.01 General

The components of this roofing system are to be manufactured, supplied, or approved in writing by Mule-Hide Products.

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2.02 Membrane

Mule-Hide White, Gray, or Tan, reinforced FB-45, FB- 60, or FB-80 thick Thermoplastic Polyolefin (TPO) Fleece Back membrane or Mule-Hide White, Gray, or Tan, reinforced FBP-45, FBP-60 or FBP-80 Fleece Back Plus membrane is used for this system. The membrane is available in a variety of widths up to 12' and in lengths of 100'. Refer to Product Data Sheets for physical properties and other information. Mule-Hide standard TPO membrane is used for flashings.

2.03 Related Materials

Mule-Hide products include: Reinforced and Non-Reinforced Flashings, Bonding Adhesives, TPO Cut-Edge Sealant, TPO Coated Metal, Membrane fasteners and discs, Thermoplastic One-Part Pourable Sealer, All-Purpose Bar, TPO Walkway Roll, Universal Single Ply Sealant, and other components.

Part 3 Execution

3.01 General

- A. Work should begin at the highest point of the roof level and proceed to the lowest point. Work should be completed on a daily bases including flashings, terminations, and daily seals.
- B. Prepare the existing roof deck or substrate according to Mule-Hide design guides and full-system specifications prior to applying the new roofing system.

3.02 Roof Deck Criteria

- A. A proper substrate shall be provided by the building owner. The structure shall be able to withstand normal construction loads and live loads.
- B. Substrate must allow for drainage so that all water is removed within 48 hours after a rain.

3.03 Substrate Preparation

- A. Re-cover projects - All wet or damaged materials must be removed and replaced with new materials.
- B. Substrate must be clean, level, and smooth allowing insulation to lay flat. Fresh applications of bitumen based roof cement must be removed or covered.

3.04 Installation

Refer to Product Data Sheets and Material Safety Data Sheets for cautions and warnings.

A. Insulation Attachment

Attach roof insulation with Manufacturer supplied roofing fasteners and plates or low-rise adhesives. Attachment rates and insulation requirements will vary depending upon substrate and desired wind uplift. Consult Mule-Hide Warranty Department for attachment requirements.

B. Membrane Installation and Hot Air Welding

Place membrane over substrate with minimum 3" overlap at lap seams and positioned so that laps will shed water. Allow membrane to relax. After membrane has relaxed, apply bonding adhesive as per manufacturer's instructions. Hot-air weld seams with automatic welder to achieve a min 2" wide heat weld. Hand welding of field seams is not acceptable.

C. Additional Membrane Securement

The membrane must be secured at the perimeter of each individual roof area, projections, and any angle change exceeding 2" per foot. Consult Mule-Hide's published detail drawings.

D. Membrane Flashing

All existing base flashings are to be removed or covered with a suitable material. Install new membrane flashings as per manufactures details and guidelines. Flashings must be terminated along top edge as per appropriate Mule-Hide detail.

E. Other Related Work

1. Walkways should be provided in areas where regular rooftop traffic is expected. Walkways are considered a maintenance item and are excluded from the Mule-Hide warranty.
2. Mule-Hide TPO Walkway Rolls are to be installed over clean, dry surfaces, with a minimum 6" spacing over field seams, with perimeter of the Walkway Roll welded to the field membrane.
3. Concrete pavers may be used if installed over one layer of HP Protection Mat.
4. Copings, counter flashing and other metal work shall be fastened to resist wind uplift and prevent buckling. Metal should be sealed to prevent moisture infiltration.

This summary specification represents the applicable information available at time of publication. Mule-Hide reserves the right to change this information at any time. Contact Mule-Hide Products or visit our website at www.mulehide.com for the latest updates, changes, or modifications to this summary specification.