



MULE-HIDE PRODUCTS CO., INC
20-Year Warranty Design Enhancements
For Mechanically Attached TPO
Roofing System Specification

TPO Systems

All products specified for this roofing system must be manufactured or approved by Mule-Hide Products Co. This criteria is limited to buildings of 50' in height and does not include buildings within 20 miles of hurricane coastlines.

Membrane / Other

1. 0.060" or 0.080" thick Mule-Hide TPO Reinforced Membranes.
2. All 'T' joints overlaid with TPO Non-Reinforced Flashing Membrane with heat welded seams.
3. All field seams must be heat welded.

Deck Type / Typical Fastener - Refer to Mule-Hide Specifications for minimum pullout criteria.

Standard Roof Deck (3)	Max Sheet Width	Max Fastener Spacing	Fastener (1)	Seam Plate (1)
Steel - Min 22 ga.	10'	12" OC	HD-14	2.4"
Wood Plank - Min 2x or Plywood - Min 23/32"	10' 8'	6" OC 12" OC	HD-14 HD-14	2.4" 2.4"
Plywood - Min 15/32" or 1x Wood Plank	8'	6" OC	HD-14	2.4"
Structural Concrete - Min 3,000 psi	10'	12" OC	HD-14 (2)	2.4"

Notes:

1. Heavier fasteners and/or plates may be required for Factory Mutual, code, or wind warranties.
2. Other fasteners may be considered, submit request to Mule-Hide prior to bidding.
3. Contact Mule-Hide Technical Department for other roof decks or non-standard roof decks.

Slope Requirement/Drainage

1. Positive drainage required (no ponding 48 hours after a rain)
2. 1/4" per horizontal foot preferred
3. 1/8" slope with sufficient number of drains and crickets/saddles may be considered

Construction Type

1. New Construction
2. Reroof - with full tear-off
3. Recover - all wet materials removed and verification by a Independent 3rd party moisture scan

Insulation/Overlayment - Mechanical Attachment*

Insulation Type or Overlay	Board Size	
	4' x 4'	4' x 8'
Approved Polyisocyanurate - Min 1.5" thick (top layer) - Min 20 psi	4	6
HD Fiberboard - Min 1/2" thick- Installed over Approved Insulation	4	8
Dens Deck Prime - Min 1/4" thick - Installed over Approved Insulation	4	8

***NOTES:**

1. Gypsum board or suitable base sheet may be approved as needed to meet required fire code.
2. Consult Specification Manual for list of approved insulations for use under overlayment.
3. Contact Mule-Hide Technical Department for Polyisocyanurate less than 1.5" in thickness.
4. Certain codes may require additional fastening requirements.

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Insulation/Overlayment - Adhesive Attachment

1. Insta-Stik by Dow Chemical Company - Other Manufactures may be considered, submit prior to bidding.

Metal Accessories

1. All Metal copings, gravel stops, fascia, and drip aprons must be either pre-manufactured by Metal-Era, or constructed with TPO Coated Metal as per approved details.
2. Mule-Hide All Purpose Bar is required when a compression bar termination is specified and must be utilized in conjunction with counterflashing by others.
3. Certain Metal accessories by others may be permitted upon Mule-Hide acceptance prior to construction.
4. The Metal-Era Anchor-Tite System must be used when the sheet metal is to be included under the warranty.
5. Conventional metal edge details that require flanges to be 'stripped in' with TPO Cover Tape or TPO membrane and adhesive are NOT allowed. In these cases, TPO Coated Metal must be used along with TPO membrane stripping with all seams heat welded.
6. All metal scuppers must have welded (soldered) seams.

Other Requirements

1. No 'As-Built'. All projects are to be reviewed and approved prior to installation.
2. Shop drawings must include all pertinent details.
3. Contact Mule-Hide Technical Department for specific code requirements such as Factory Mutual (FM) or Underwriters Laboratory (UL).

Warranty Wind Speed (Maximum Peak Gusts)

Wind speed coverage for a specific project will vary depending on the deck type, fastening density, location and height of the roof. Certain codes may require additional fastening requirements.

Contact Mule-Hide Technical Department for specific requirements such as sheet width and fastener spacing.

Wind Speed	Perimeter Sheets
55-MPH	Minimum of two (2) perimeter sheets
72-MPH	Minimum of three (3) perimeter sheets

NOTES:

1. **These are enhancements to the Mule-Hide TPO Mechanically Attached System Specification, as written in the Mule-Hide TPO Specification Manual. Refer to the Mule-Hide TPO Specification Manual for complete specification and details.**
2. **The information contained in this document is general information. Requirements may be different for each specific job based on the conditions of each building. Always contact Mule-Hide Technical Department to review the specific job conditions prior to bidding the project.**