10 or 15 Year Warranty Design Summary

"The name trusted in roofing since 1906"

PVC - Fully Adhered

Revision Date May 13, 2019

All products specified for this roofing system must be manufactured or approved by Mule-Hide Products Co. This criteria is limited to buildings of 100' in height or less.

Membrane / Adhesive Type / Other

- 0.050" or 0.060" or 0.080" thick Mule-Hide Reinforced PVC or PVC KEE HP
- Mule-Hide Low-VOC PVC Bonding Adhesive, Aqua Base 120 or HydroBOND water based PVC Bonding Adhesive – NOTE HydroBOND is not approved for use with PVC KEE HP
- All 'T' joints overlaid with PVC Non-Reinforced Flashing Membrane with heat welded seams. See detail MHP-115B
- Field/Wall seam transitions must be overlaid with PVC Non-Reinforced Flashing Membrane with heat welded seams. See detail MHP-115C
- 5. All field seams must be heat welded.

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

Standard Roof Deck (4)	Insulation Fastener (1)	Insulation Plate
Steel (22 gauge or heavier)	Mule-Hide DP (#12)	Mule-Hide 3" Metal Stress Plates
Structural Concrete (3,000 psi)	Mule-Hide HDP (#14) (2)	Mule-Hide 3" Metal Stress Plates
Plywood (Min 15/32" thick)	Mule-Hide DP (#12)	Mule-Hide 3" Metal Stress Plates
Wood Plank (Min 1-1/2" thick)	Mule-Hide DP (#12)	Mule-Hide 3" Metal Stress Plates
Fibrous Cement & Gypsum (2)(3)	TL Fasteners by Tru-Fast	3" Galvalume Insulation Plate by Tru-Fast

Notes:

- 1. Heavier gauge fasteners may be required to meet Factory Mutual or code requirements.
- 2. Other fasteners may be considered, submit request to Mule-Hide prior to bidding.
- 3. Pullout testing is required, must exceed 300 pounds with TL Fastener.
- 4. 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
- Reroof Full tear off of existing roofing down to deck
- 3. Recover Over existing roofing system or existing insulation (all wet materials removed)

Insulation/Overlayment - Mechanical Attachment into Standard Roof Decks*

Insulation Type or Overlay		Fasteners per 4' x 8' board		
		Perimeter	Corner	
Approved Polyisocyanurate - Min 2" thick (top layer)	8	12	16	
Approved Polyisocyanurate - Min 1.5" up to 2" thick		18	24	
HD Fiberboard - Min 1/2" thick- Installed over Approved Insulation NOTE HydroBOND is not approved for use with PVC KEE HP		24	32	
Dens Deck Prime - Min 1/4" thick - Installed over Approved Insulation	12	18	24	
OSB - Min 7/16" thick - Installed over Approved Insulation		25	32	
Approved OSB/Polyisocyanurate Composite - Min 2" thick	17	25	32	

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*NOTES:

- 1. Thicknesses stated are for single layer of material.
- 2. Consult Specification Manual for list of approved insulations for use under overlayment.
- 3. Polyisocyanurate less than 1.5" in thickness requires approved overlayment.
- 4. Insulation fastening density shall not be less than 1 per 2 square feet on fibrous cement and gypsum decks.
- 5. Certain codes may require additional fastening requirements.
- 6. Mule-Hide defines perimeter areas as a minimum of 8 feet. Corners areas are the intersections of the perimeter areas.
- 7. Factory Mutual defines perimeter areas as the lesser of 0.1 times the building width or 0.4 times the building height. Corners areas are the intersections of the perimeter areas.
- 8. System warranties require the use of Mule-Hide labeled components, products supplied by Mule-Hide or approved in writing by Mule-Hide prior to the start of the project.

Insulation/Overlayment - Adhesive Attachment

1. **Mule-Hide Helix® Max Low-Rise Adhesives**. Refer to the specifications and appropriate Helix® Max Product Data Sheet for acceptable insulations, substrates, and bead spacing.

Metal Accessories

- 1. All Metal copings, gravel stops, fascia, and drip aprons must be installed according to Mule-Hide approved details.
- 2. Conventional metal edge details that require flanges to be 'stripped in' must be construction from PVC coated sheet metal and stripped in with PVC membrane. All seams are to be <u>heat-welded</u>.
- 3. All Metal Scuppers must have welded (soldered) seams.
- 4. Metal accessories provided by Mule-Hide will be included in System warranties.

Other Requirements

- 1. No 'As-Built' projects. 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 Florida NOA, Factory Mutual (FM) or Underwriters Laboratory (UL).

NOTES:

- 1. This is a summary of the Mule-Hide PVC Fully Adhered System Specification, as written in the Mule-Hide PVC Specification Manual. Refer to Mule-Hide PVC Specification Manual for complete specification and details.
- 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.