



TRU-SPIKE FASTENER

PRODUCT DESCRIPTION

Revision Date: June 4, 2019

Mule-Hide Tru-Spike Fastener is a one-piece, vibration-resistant anchor designed to attach insulation, single-ply roofing, wood and steel to structural concrete roof decks and walls. Featuring an “S” shaped configuration at the working end to create an expansion mechanism, it provides a fast, reliable fastening solution for roof applications over structural concrete surfaces.

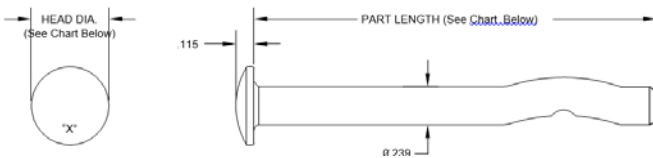
APPROPRIATE ACCESSORIES

For use with Mule-Hide 2.4” Seam Plates, 3” Insulation Plates, AP Bar & Batten Bar.

MATERIAL SPECIFICATIONS

Material: AISI1038 Carbon Steel Manufacturing Facility: Bryan, OH
 Coating: Tru-Kote™ Epoxy E-Coat LEED Eligible Recycled Content: 20%

PRODUCT SPECIFICATIONS



PRODUCT SELECTION

Part Length	Head Dia.	Pkg. Qty.	Pkg. Wt.
1-1/4"	31.8 mm	.500 mm 12.7 mm	500/Bucket 11 lbs.
1-1/2"	38.1 mm	.500 mm 12.7 mm	500/Bucket 12.5 lbs.
2"	50.8 mm	.500 mm 12.7 mm	500/Bucket 16.5 lbs.
2-1/2"	63.5 mm	.500 mm 12.7 mm	500/Bucket 20 lbs.
3"	76.2 mm	.500 mm 12.7 mm	500/Bucket 23.5 lbs.
3-1/2"	88.9 mm	.500 mm 12.7 mm	500/Bucket 27 lbs.
4"	101.6 mm	.500 mm 12.7 mm	500/Bucket 30.5 lbs.
4-1/2"	114.3 mm	.500 mm 12.7 mm	500/Bucket 34 lbs.
5"	127.0 mm	.500 mm 12.7 mm	500/Bucket 37.5 lbs.
5-1/2"	139.7 mm	.500 mm 12.7 mm	500/Bucket 41 lbs.
6"	152.4 mm	.500 mm 12.7 mm	250/Bucket 23 lbs.
6-1/2"	165.1 mm	.450 mm 11.4 mm	250/Bucket 24.5 lbs.
7"	177.8 mm	.450 mm 11.4 mm	250/Bucket 26.5 lbs.
7-1/2"	190.5 mm	.450 mm 11.4 mm	250/Bucket 28 lbs.
8"	203.2 mm	.450 mm 11.4 mm	250/Bucket 30 lbs.
9"	228.6 mm	.450 mm 11.4 mm	250/Bucket 33.5 lbs.
10"	254 mm	.450 mm 11.4 mm	250/Bucket 37 lbs.
11"	279.4 mm	.450 mm 11.4 mm	100/Bucket 16 lbs.
12"	304.8 mm	.450 mm 11.4 mm	100/Bucket 17.5 lbs.
13"	330.2 mm	.450 mm 11.4 mm	100/Carton 19 lbs.
14"	355.6 mm	.450 mm 11.4 mm	100/Carton 20.5 lbs.
15"	381.0 mm	.450 mm 11.4 mm	100/Carton 22 lbs.
16"	406.4 mm	.450 mm 11.4 mm	100/Carton 23 lbs.



TRU-SPIKE FASTENERS

PERFORMANCE DATA

Average Ultimate Load Capacities in Normal-Weight Concrete*

	Minimum Concrete Compressive Strength							
	2,000 psi		3,000 psi		4,000 psi		5,000 psi	
Min. Embedment Depth	1"	1-1/4"	1"	1-1/4"	1"	1-1/4"	1"	1-1/4"
Tensile Strength	620 lbs.	830 lbs.	775 lbs.	1,100 lbs.	835 lbs.	1,210 lbs.	885 lbs.	1,320 lbs.
Shear Strength	1,585 lbs.	1,815 lbs.	1,965 lbs.	2,020 lbs.	2,160 lbs.	2,220 lbs.	2,360 lbs.	2,585 lbs.

* Tabulated load values are for fasteners installed in concrete. Concrete compressive strength must be at the specified minimum at the time of installation. Ultimate load capacities must be reduced by a minimum safety factor of 4.0 or greater to determine allowable working load. Consideration of safety factor of 10 or higher may be necessary depending upon the application, such as life safety or overhead.

Average Ultimate Load Capacities in Structural Lightweight Concrete*

	Minimum Concrete Compressive Strength		
	3,000 psi	4,000 psi	5,000 psi
Min. Embedment Depth	1-1/4"	1-1/4"	1-1/4"
Tensile Strength	480 lbs.	440 lbs.	400 lbs.
Shear Strength	1,720 lbs.	1,720 lbs.	1,720 lbs.

* Tabulated load values are for fasteners installed in concrete. Concrete compressive strength must be at the specified minimum at the time of installation. Ultimate load capacities must be reduced by a minimum safety factor of 4.0 or greater to determine allowable working load. Consideration of safety factor of 10 or higher may be necessary depending upon the application, such as life safety or overhead.

Average Ultimate and Allowable Load Capacities in Grouted Concrete Masonry*

	Normal-Weight CMU, f'm ≥ 1,500 psi			
	Ultimate Load		Allowable Load	
	1"	1-1/4"	1"	1-1/4"
Min. Embedment Depth	1"	1-1/4"	1"	1-1/4"
Tensile Strength	670 lbs.	800 lbs.	135 lbs.	160 lbs.
Shear Strength	1,840 lbs.	2,100 lbs.	370 lbs.	240 lbs.

* Tabulated load values are for fasteners installed in minimum 6" wide, minimum Grad N, Type II, lightweight, medium-weight or normal-weight concrete masonry units conforming to ASTM C 90. Mortar must be minimum Type N. Masonry cells may be grouted. Masonry compressive strength must be at the specified minimum at the time of installation (f'm ≥ 1,500 psi). Allowable load capacities listed are calculated using an applied safety factor of 5.0. Consideration of safety factors of 10 or higher may be necessary depending upon the application, such as life safety and in sustained tensile loading applications. Linear interpolation may be used to determine allowable load capacities for intermediate embedments. The tabulated values are for fasteners installed at a minimum of 16 fastener diameters on center.

INSTALLATION GUIDELINES

ANSI Drill Bit Size: 1/4" dia. Fixture Clearance Hole: 5/16" dia.

Pre-drill a 1/4" diameter hole using a drill bit that meets the requirement of ANSI Standard B212.15. The hole must be a minimum of 1/2" deeper than the fastener embedment. The fastener is installed with a hammer to a minimum embedment of 1" until the head of the fastener is properly seated in the plate or bar. Care should be taken to not damage the insulation or membrane by overdriving the fastener.

DISCLAIMER

The performance specifications published in this Mule-Hide Product Data Sheet are based on controlled laboratory tests and are intended as a guideline only. They are not guaranteed in any way by Mule-Hide Products Co., Inc. or its supplier, since the building design, engineering and construction (including workmanship and materials) are beyond our control. Mule-Hide recommends that fastener pull tests be conducted to verify the substrate provides adequate pullout resistance.

PROTECTION & SAFETY

Mule-Hide maintains Safety Data Sheets on all of its non-exempt products. Safety Data Sheets contain health and safety information for your development of appropriate product handling procedures to protect your employees and customers. Mule-Hide Safety Data Sheets should be read and understood by all of your supervisory personnel and employees before using Mule-Hide products in your facilities.

Product Data Sheet

HP-X FASTENERS™ AND RHINO BOND PLATES®

ADDITIONAL INFORMATION

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

DISCLAIMER

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