



Tru-Spike Fasteners

One-Piece, Vibration-Resistant Anchor



PRODUCT DATA SHEET

DESCRIPTION

The 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 MuleHide 2.4" Seam Plates, 3" Insulation Plates, and All Purpose Bar.

MATERIAL SPECIFICATIONS

Material: AISI 1038 Carbon Steel

Coating: Tru-Kote™ Eposy E-Coat

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.

LEED® INFORMATION

Recycled Content	20%
Manufacturing Location	Bryan, OH

PROTECTION & SAFETY

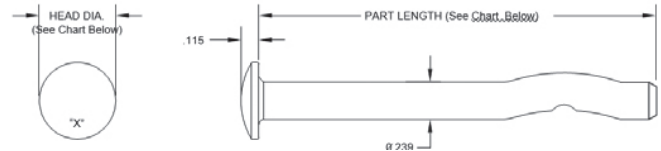
MuleHide maintains safety data sheets on all of its non-exempt products. Safety data sheets contain health and safety information for your development of appropriate product handling procedures to protect your employees and customers. MuleHide's safety data sheets should be read and understood by all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

ADDITIONAL INFORMATION

On projects where a MuleHide standard or premium warranty is requested, an authorized MuleHide representative shall inspect all completed work.

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

PRODUCT SPECIFICATIONS



PACKAGING

Product Length	Head Diameter	Pieces/Box	Weight/Box
1-1/4"	.500mm 12.7mm	500	11 lbs.
1-1/2"	.500mm 12.7mm	500	12.5 lbs.
2"	.500mm 12.7mm	500	16.5 lbs.
2-1/2"	.500mm 12.7mm	500	20 lbs.
3"	.500mm 12.7mm	500	23.5 lbs.
3-1/2"	.500mm 12.7mm	500	27 lbs.
4"	.500mm 12.7mm	500	30.5 lbs.
4-1/2"	.500mm 12.7mm	500	34 lbs.
5"	.500mm 12.7mm	500	37.5 lbs.
5-1/2"	.500mm 12.7mm	500	41 lbs.
6"	.500mm 12.7mm	250	23 lbs.
6-1/2"	.450mm 11.4mm	250	24.5 lbs.
7"	.450mm 11.4mm	250	26.5 lbs.
7-1/2"	.450mm 11.4mm	250	28 lbs.
8"	.450mm 11.4mm	250	30 lbs.
9"	.450mm 11.4mm	250	33.5 lbs.
10"	.450mm 11.4mm	250	37 lbs.
11"	.450mm 11.4mm	100	16 lbs.
12"	.450mm 11.4mm	100	17.5 lbs.
13"	.450mm 11.4mm	100	19 lbs.
14"	.450mm 11.4mm	100	20.5 lbs.
15"	.450mm 11.4mm	100	22 lbs.
16"	.450mm 11.4mm	100	23 lbs.



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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	
Minimum 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
Minimum 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 Load Capacities in Grouted Concrete Masonry*

	NORMAL WEIGHT CMU, F'M ≥ 1,500 PSI			
	Ultimate Load		Allowable Load	
Minimum 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.	1,720 lbs.	370 lbs.	240 lbs.
*Tabulated load values are for fasteners installed in minimum 6" wide, minimum Grad N, Type II, light weight, 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.				

DISCLAIMER

The statements provided concerning the material shown are intended as a guide for material usage and are believed to be true and accurate at the time of printing. No statement made by anyone may supersede this information, except when done in writing by Mule-Hide Products Co., Inc. ("MuleHide"). Since the manner of use is beyond our control, MuleHide does not authorize anyone to make any warranty of merchantability or fitness for any particular purpose or any other warranty, guarantee or representation, expressed or implied, concerning this material. This product may be eligible for a MuleHide warranty, please check the MuleHide website at www.mulehide.com or contact MuleHide directly at 800-786-1492 for details. Buyer and user accept the product under these conditions and assume the risk of any failure, any injury to person or property (including that of the user), loss or liability resulting from the handling, storage or use of the product whether or not it is handled, stored or used in accordance with the directions or specifications. MuleHide must be notified in writing of any claims and be given the opportunity to inspect the alleged failure before repairs are made.