



# HDP Fasteners

## Heavy Drill Point #14 Fasteners



### PRODUCT DATA SHEET

#### DESCRIPTION

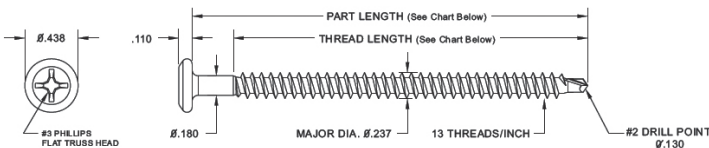
Heavy Drill Point Fasteners are #14 fasteners that are specifically engineered to attached insulation, cover boards and base sheets to wood and steel decking (16 to 22 gauge). These fasteners incorporate a #3 Phillips recess, flat truss head with a #2 double flute self-drilling point. The drill point has an exclusive tapered entry thread design that allows for fastener penetration into steel roof decks and offers exceptional back-out resistance.

#### BASIC USES

HDP Fasteners are designed specifically for the mechanical attachment of MuleHide's reinforced EPDM, TPO and PVC membranes and for the mechanical attachment of Poly ISO 1 and Poly ISO 2 roof insulation boards and other FM approved insulation/cover boards into steel, wood and concrete decks. HDP Fasteners may be used in conjunction with the MuleHide 2.4" Seam Plates, 3" Insulation Plates and All Purpose Bars.

#### SPECIFICATIONS

| Property             | Standard                       | Average Ultimate Value        |
|----------------------|--------------------------------|-------------------------------|
| Wire                 | --                             | SAE C-1022, heat treated wire |
| Coating              | --                             | TRU-Kote™ Epoxy E-Coat        |
| Corrosion Resistance | FM 4470, ASTM D6294, DIN 50018 | <15% Red Rust After 30 Cycles |
| Tensile Strength     | ASTM F606-10                   | 3,200 lb.                     |
| Shear Strength       | NASM 1312-20                   | 2,200 lb (thread zone)        |



#### CODE APPROVALS/COMPLIANCE

MuleHide HDP Fasteners comply with the requirements of the following specifications, test and code requirements when properly installed:

- FM Standard 4450/4470 Approval
- Miami-Dade Approved
- Florida Product Approval

#### LEED® INFORMATION

|                               |           |
|-------------------------------|-----------|
| LEED Eligible Recycle Content | 20%       |
| Manufacturing Location        | Bryan, OH |

#### PACKAGING

| Screw Length* | Thread Length* | Pieces/Box | Weight/Box |
|---------------|----------------|------------|------------|
| 1-1/4"        | 1-1/4"         | 1000       | 11.9 lbs.  |
| 1-1/2"        | 1-1/2"         | 1000       | 14.2 lbs.  |
| 2"            | 2"             | 1000       | 16.8 lbs.  |
| 2-1/2"        | 2-1/2"         | 1000       | 20.7 lbs.  |
| 3"            | 2-7/8"         | 1000       | 25.0 lbs.  |
| 3-1/2"        | 2-7/8"         | 1000       | 29.5 lbs.  |
| 4"            | 3-7/8"         | 1000       | 32.2 lbs.  |
| 4-1/2"        | 3-7/8"         | 1000       | 35.3 lbs.  |
| 5"            | 3-7/8"         | 1000       | 39.0 lbs.  |
| 5-1/2"        | 3-7/8"         | 1000       | 43.6 lbs.  |
| 6"            | 3-7/8"         | 1000       | 45.7 lbs.  |
| 7"            | 3-7/8"         | 500        | 26.8 lbs.  |
| 8"            | 3-7/8"         | 500        | 30.9 lbs.  |
| 9"            | 3-7/8"         | 250        | 17.8 lbs.  |
| 10"           | 3-7/8"         | 250        | 19.6 lbs.  |
| 11"           | 3-7/8"         | 250        | 21.9 lbs.  |
| 12"           | 3-7/8"         | 250        | 23.2 lbs.  |

\*Screw length and thread length are ± 1/16"

#### INSTALLATION INSTRUCTIONS

##### Steel and Wood Decks

Install fasteners with #3 Phillips drive bit provided in box and a variable speed screw gun. Fastener must penetrate the deck a minimum of 3/4" as measured from the underside of the roof deck to the fastener tip. Ensure that the fastener is installed perpendicular to the surface of the roof deck. Care should be taken to not overdrive the fastener causing damage to the roof insulation, fastener or roof deck.

##### Concrete Decks

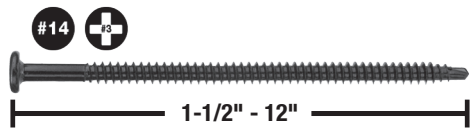
Pre-drill a 3/16" diameter hole using a drill bit that meets ANSI Standard B212.15 requirements and hammer drill. Drill a hole a minimum of 1/2" deeper than fastener embedment and clean debris from hole. Using the #3 Phillips drill bit provided and a 0 to 1500 rpm screw gun, install the fastener to a minimum embedment of 1" until fastener head is properly seated in the bar or plate. Care should be taken to not overdrive the fastener causing damage to the roof insulation, fastener or roof deck.

Use eye protection when installing fasteners.



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## PRODUCT DATA SHEET

### PERFORMANCE INFORMATION

| AVERAGE ULTIMATE PULLOUT VALUES IN CORRUGATED STEEL DECK SUBSTRATES                                                                                                                                                                                                                                                                                                                                    |               |        |        |        |                   |        |        |        |      |           |        |       |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|--------|--------|-------------------|--------|--------|--------|------|-----------|--------|-------|-------|
| Thickness                                                                                                                                                                                                                                                                                                                                                                                              | 24 ga.        | 22 ga. |        |        | 20 ga.            |        |        | 18 ga. |      |           | 16 ga. |       |       |
| Strength, ksi                                                                                                                                                                                                                                                                                                                                                                                          | 36.5          | 33.0   | 80.0   | 102.0  | 33.0              | 80.0   | 102.0  | 33.0   | 80.0 | 102.0     | 33.0   | 80.0  | 102.0 |
| Pullout (lbs)                                                                                                                                                                                                                                                                                                                                                                                          | 255           | 315    | 480    | 560    | 420               | 615    | 710    | 675    | 885  | 985       | 850    | 1,115 | 1,240 |
| AVERAGE ULTIMATE PULLOUT VALUES IN WOOD SUBSTRATES                                                                                                                                                                                                                                                                                                                                                     |               |        |        |        |                   |        |        |        |      | CONCRETE  |        |       |       |
| Type                                                                                                                                                                                                                                                                                                                                                                                                   | APA Rated OSB |        |        |        | APA Rated Plywood |        |        |        |      | 3,000 psi |        |       |       |
| Thickness                                                                                                                                                                                                                                                                                                                                                                                              | 7/16"         | 15/32" | 19/32" | 23/32" | 15/32"            | 19/32" | 23/32" | SPF #2 |      |           |        |       |       |
| Pullout (lbs)                                                                                                                                                                                                                                                                                                                                                                                          | 270           | 290    | 310    | 410    | 360               | 410    | 730    | 795*   |      | 450*      |        |       |       |
| <ul style="list-style-type: none"><li>* lbf./in. of thread penetration including tip.</li><li>Pull out values are offered only as a guide and are not guaranteed in any way.</li><li>Designated holding powers are dependent upon quality of substrate and accuracy of installation.</li><li>MuleHide recommends that fastener pull out testing be performed to verify fastener performance.</li></ul> |               |        |        |        |                   |        |        |        |      |           |        |       |       |

### 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](http://www.mulehide.com) for the latest information, changes and updates or contact MuleHide at 800-786-1492.

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