# TRUFAST® TRUSTED CONNECTIONS

# 1/4″ CONCRETE ROOFING FASTENERS

PRODUCT INFORMATION

Not to scale.

## CODE APPROVALS & LISTINGS

| | |
|---|---|
| FM Global | FM APPROVED |

## MATERIAL SPECIFICATIONS

| | |
|---|---|
| Material: | AISI 1038 Carbon Steel |
| Coating: | Tru-Kote™ Epoxy E-Coat |

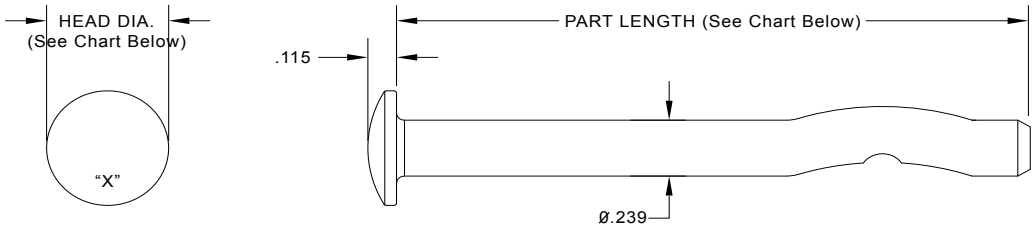
## PRODUCT DESCRIPTION

The TRUFAST® Concrete Fastener is a one-piece, vibration-resistant anchor designed to fasten insulation, single-ply roof membrane, wood, and steel to structural concrete roof decks. Featuring an “S” shaped configuration at the working end of the fastener to create an expansion mechanism, it provides a fast, reliable fastening solution for structural concrete roof applications.

## APPROPRIATE ACCESSORIES

Use with TRUFAST MP-2000, MPB-2000, MPB-2400 Seam Plates; MP-3000 and MPR-3000 Insulation Plates; and BB-18F and BB-18R Batten Bar.

## PRODUCT SPECIFICATIONS




## PRODUCT SELECTION

| Part No. | Part Length | | Head Dia. | | Pkg. Qty. | Pkg. Wt. | Pallet Qty. |
|---|---|---|---|---|---|---|---|
| TS250-1250 | 1-1/4″ | 31.8 mm | .500″ | 12.7 mm | 500/Bucket | 11.2 lbs. | 30,000 |
| TS250-1500 | 1-1/2″ | 38.1 mm | .500″ | 12.7 mm | 500/Bucket | 12.9 lbs. | 30,000 |
| TS250-2000 | 2″ | 50.8 mm | .500″ | 12.7 mm | 500/Bucket | 16.8 lbs. | 30,000 |
| TS250-2500 | 2-1/2″ | 63.5 mm | .500″ | 12.7 mm | 500/Bucket | 20.4 lbs. | 30,000 |
| TS250-3000 | 3″ | 76.2 mm | .500″ | 12.7 mm | 500/Bucket | 23.9 lbs. | 30,000 |
| TS250-3500 | 3-1/2″ | 88.9 mm | .500″ | 12.7 mm | 500/Bucket | 27.4 lbs. | 30,000 |
| TS250-4000 | 4″ | 101.6 mm | .500″ | 12.7 mm | 500/Bucket | 30.9 lbs. | 30,000 |
| TS250-4500 | 4-1/2″ | 114.3 mm | .500″ | 12.7 mm | 500/Bucket | 34.4 lbs. | 30,000 |
| TS250-5000 | 5″ | 127.0 mm | .500″ | 12.7 mm | 500/Bucket | 38.0 lbs. | 30,000 |
| TS250-5500 | 5-1/2″ | 139.7 mm | .500″ | 12.7 mm | 500/Bucket | 41.5 lbs. | 30,000 |
| TS250-6000 | 6″ | 152.4 mm | .500″ | 12.7 mm | 250/Bucket | 23.1 lbs. | 15,000 |
| TS250-6500 | 6-1/2″ | 165.1 mm | .450″ | 11.4 mm | 250/Bucket | 24.9 lbs. | 15,000 |
| TS250-7000 | 7″ | 177.8 mm | .450″ | 11.4 mm | 250/Bucket | 26.6 lbs. | 15,000 |
| TS250-7500 | 7-1/2″ | 190.5 mm | .450″ | 11.4 mm | 250/Bucket | 28.4 lbs. | 15,000 |
| TS250-8000 | 8″ | 203.2 mm | .450″ | 11.4 mm | 250/Bucket | 30.1 lbs. | 15,000 |
| TS250-9000 | 9″ | 228.6 mm | .450″ | 11.4 mm | 250/Bucket | 33.6 lbs. | 15,000 |
| TS250-10000 | 10″ | 254.0 mm | .450″ | 11.4 mm | 250/Bucket | 37.1 lbs. | 15,000 |
| TS250-11000 | 11″ | 279.4 mm | .450″ | 11.4 mm | 100/Bucket | 17.0 lbs. | 6,000 |
| TS250-12000 | 12″ | 304.8 mm | .450″ | 11.4 mm | 100/Bucket | 18.4 lbs. | 6,000 |
| TS250-13000 | 13″ | 330.2 mm | .450″ | 11.4 mm | 100/Carton | 19.7 lbs. | 3,000 |
| TS250-14000 | 14″ | 355.6 mm | .450″ | 11.4 mm | 100/Carton | 21.1 lbs. | 3,000 |
| TS250-15000 | 15″ | 381.0 mm | .450″ | 11.4 mm | 100/Carton | 22.3 lbs. | 3,000 |
| TS250-16000 | 16″ | 406.4 mm | .450″ | 11.4 mm | 100/Carton | 23.6 lbs. | 3,000 |

# 1/4″ CONCRETE ROOFING FASTENERS

PRODUCT INFORMATION

## 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 | |
| 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 confirming 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 ar 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 ½″ 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.

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## DISCLAIMER

The information provided here is subject to change without notice. The performance specifications published in this TRUFAST® product literature are based on controlled laboratory tests and are intended as a guideline only. They are not guaranteed in any way by the ALTENLOH, BRINCK & CO US, INC., since building design, engineering, and construction, including workmanship and materials, are beyond the control of the manufacturer. The manufacturer recommends that pull-out tests be conducted to verify the substrate provides adequate pull-out values.