

Powerlite™ Roofing Anchor

PRODUCT DESCRIPTION

The Powerlite is a fastener used to mechanically attach rigid insulation board and single-ply membrane to structural cement wood fiber, gypsum, and lightweight insulating concrete roof decks. The fastener is used in conjunction with insulation and membrane plates. Both types of stress plates are formed from Galvalume, an alloy material which meets Factory Mutual Research Corporation Standard 4470 for corrosion protection. The plates are manufactured with four barbs on the underside that grip the insulation board or single-ply membrane preventing rotation.

The Powerlite is designed with a high thread profile along with a tapered root diameter and sharp point. This unique design allows the Powerlite to penetrate the roof deck and progressively compact the base material creating a stronger hold in weak material. Normally, the Powerlite can be installed into cement wood fiber decks such as Tectum® without pre-drilling. Decks such as Insulrock may require a 5/16" pre-drilled hole. Gypsum and lightweight insulating concrete decks should be pre-drilled using a 3/8" or 7/16" carbide tipped bit. Larger carbide tipped bits up to 1/2" in diameter can be used in denser material. The drill bit size to be used should be determined during the job site test.

APPROVALS AND LISTINGS

Factory Mutual Research Corporation – Now known as FM Global (FM Approvals)
 Gypsum and Tectum Decks – J.I. 1Q2A2.AM, J.I.1T9A4.AM
 Recover Construction – J.I. 1T9A4.AM
 All Deck Types
 Fully Adhered Single-Ply and Modified Bitumen Roof Coverings – J.I. 1T9A4.AM
 Single Ply Roof Covers in Cementitious Wood Fiber Deck – J.I. 3X2A7.AM

MATERIAL SPECIFICATIONS

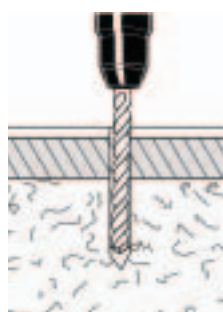
Anchor Component	Component Material
Fastener Body	Nylon
Plate	Galvalume Coated Steel

INSTALLATION SPECIFICATIONS

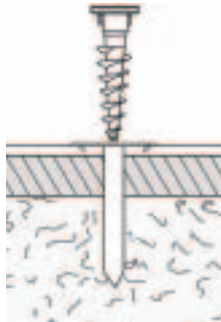
Head Size, O.D. (in.)	1
Head Height (in.)	1/8
Insert Size (in.)	1/4
Fixture Clearance Hole* (in.)	5/8

* Fixture Clearance holes are needed only when plywood or other rigid materials are fastened to a roof deck

Installation Guidelines



If predrilling is required, drill a hole into the base material to a depth 1/2" greater than the embedment required. The tolerances of the drill bit should meet the requirements of ANSI Standard B94.12



Place the Powerlite plate on the insulation (3" round) or membrane (2" round)



Using an impact wrench, drive the Powerlite through the plate into the base material until the head of the fastener is properly seated in the plate. The plate should be seated securely against the insulation or membrane. Do not overdrive.

SECTION CONTENTS Page No.

General Information	359
Material Specifications	359
Installation Specifications	359
Performance Data	360
Ordering Information	360



Powerlite

ANCHOR MATERIALS

Reinforced Engineered Nylon

ANCHOR SIZE RANGE (TYP.)

2" to 14" Lengths

SUITABLE BASE MATERIALS

Structural Cement Wood Fiber
 Gypsum
 Lightweight Concrete

PERFORMANCE DATA

Ultimate Load Capacities for Powerlite in various Base Materials¹

Base Material	Pre-Drill in.	Minimum Embedment Depth <i>h_v</i> in. (mm)	Tension lbs. (kN)
Tectum	–	1 1/2 (38.1)	280 (1.3)
Tectum	–	2 (50.8)	440 (2.0)
Tectum	–	2 1/2 (63.5)	595 (2.7)
3" Insulrock	5/16	2 1/2 (63.5)	365 (1.6)
Poured Gypsum	3/8	2 (50.8)	540 (2.4)

1. The test data above represents average ultimate loads and should be used as guideline only. Apply an appropriate safety factor. Jobsite tests are recommended. Tectum® is registered trademark of Tectum, Inc.

ORDERING INFORMATION

Powerlite

Catalog Number	Length	Minimum Embedment	Standard Carton	Wt./100
4670	2"	1 1/2"	500	3
4671	2 1/2"	1 1/2"	500	3
4672	3"	1 1/2"	500	3
4673	3 1/2"	1 1/2"	500	4
4674	4"	1 1/2"	500	4
4675	4 1/2"	1 1/2"	500	4
4676	5"	1 1/2"	500	4
4677	5 1/2"	1 1/2"	500	5
4678	6"	1 1/2"	500	5
4679	6 1/2"	1 1/2"	500	5
4680	7"	1 1/2"	500	5
4681	7 1/2"	1 1/2"	500	6
4683	8"	1 1/2"	250	6
4684	8 1/2"	1 1/2"	250	6
4685	9"	1 1/2"	250	6
4686	9 1/2"	1 1/2"	250	7
4687	10"	1 1/2"	250	7
4688	11"	1 1/2"	250	7
4689	12"	1 1/2"	250	8
4691	13"	1 1/2"	250	8
4692	14"	1 1/2"	250	9
3876	2" Powerlite Plate	–	500	3 1/2
3896	3' Powerlite Plate	–	500	3 1/2



ROOFING FASTENERS