

#12 Roofing Fasteners

TECHNICAL PRODUCT INFORMATION



Imperfast Fasteners #12 roofing insulation screws are designed to be used with Imperfast Fasteners insulation plates to secure roof insulation, cover panels, or base sheets to steel or wood structural decks. Screws range from 1-5/8" to 8" in length and meet most commercial design standards.

FEATURES & BENEFITS

Each pail comes with two (2) #3 Phillips head drill bits fabricated from S2 alloy steel, which has a higher mechanical wear resistance under impact and torsion conditions compared to typical Cr-V drill bits.

When tested in accordance with the criteria established by ASTM D6294 Standard Test Method for Corrosion Resistance of Ferrous Metal Fastener Assemblies Used in Roofing and Waterproofing, Imperfast Fasteners with black e-coat technology pass with less than 15% red rust for up to 30 cycles, which is twice the ASTM minimum of 15 cycles. Imperfast Fasteners can also be installed in decks as heavy as 18 gauge.

Factory Mutual and Florida Building Code approved.



FBC:
FL41667

STORAGE & HANDLING

Store fasteners and plates in original containers and protected from the weather.

INSTALLATION

On heavier gauge decks, "feather" the trigger of the screw gun to start slowly and then gradually increase speed.

Using a #3 Phillips drill bit and a variable speed, 2,500 RPM screw gun, engage the screw and insulation plate simultaneously into the roof deck for a minimum embedment as listed below:

Steel: Minimum penetration of 3/4" (19.1 mm) below the deck.

Plywood: Minimum penetration of 1" (25.4 mm) below the deck.

Wood plank: Minimum penetration of 1" (25.4) into the deck.

PRECAUTIONS

Eye protection must always be worn while installing screws and plates. Avoid overtightening screws, which may cause compression of insulation or cutting of single ply membranes if

barbed plates are allowed to spin past their initial embedment into the membrane.

Safety first! Read all label information, SDS, and precautions before using. For safety information on our products, please visit www.bitec.com.

SIZES AND PACKAGING

Screw Length	Thread Length	Pieces per Pall	Weight per Pall	Pails per Pallet
1-5/8" 41.3 mm	Full	1,000	12 lbs 5.4 kg	60
2" 50.8 mm	Full	1,000	15 lbs 6.8 kg	60
2-1/4" 57.2 mm	Full	1,000	17 lbs 7.7 kg	60
2-7/8" 73.0 mm	Full	1,000	21 lbs 9.5 kg	60
3" 76.2 mm	Full	1,000	23 lbs 10.4 kg	60
3-1/4" 82.5 mm	3" 76.2 mm	1,000	23 lbs 10.4 kg	60
3-3/4" 95.3 mm	3" 76.2 mm	1,000	26 lbs 11.8 kg	60
4" 101.6 mm	Full	1,000	29 lbs 13.2 kg	60
4-1/2" 114.3 mm	4" 101.6 mm	1,000	31 lbs 14.1 kg	40
5" 127.0 mm	4" 101.6 mm	1,000	36 lbs 16.3 kg	40
6" 152.4 mm	4" 101.6 mm	1,000	41 lbs 18.6 kg	40
7" 177.8 mm	4" 101.6 mm	1,000	48 lbs 21.8 kg	40
8" 203.2 mm	4" 101.6 mm	1,000	54 lbs 24.5 kg	40



PHYSICAL / MECHANICAL PROPERTIES

3rd Party Independent (Nemo ETC SGS SA Element Materials Technology)			
Tensile	2,760 lbf minimum	2,928 lbf average	ASTM F606 / F606M-2019
Shear Test	2,640 lbf minimum	2,674 lbf average	ASTM F606 / F606M-2019
Torque Test	80 lbf / in minimum	89 lbf / in average	ASTM F606 / F606M-2019
Corrosion Resistance	<5% red rust @ 15 Kesternich cycles		DIN 50018 / ASTM D6294 / FM 4470
	<15% red rust @ 30 Kesternich cycles		DIN 50018 / ASTM D6294 / FM 4470

Anticipated Withdrawal Resistance	
22 Ga, 40 ksi Grade Steel	461 lb average
22 Ga, 80 ksi Grade Steel	483 lb average
19/32" Plywood	596 lb average

NOTE: Withdrawal values are approximated based on results obtained over new, properly installed substrates performing in ideal conditions. Project-specific results may vary based on site-specific conditions. BITEC ultimately defers to the project designer and local code authorities to confirm that their required design criteria have been met.

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