

Technical Information Sheet



Heavy Duty (HD) ISOGARD™ HG/HailGard™ Fastener

Size	Item Number	Size	Item Number
2 1/2"	W56RAC4405	6"	W56RAC4412
3"	W56RAC4406	6 1/2"	W56RAC4413
3 1/2"	W56RAC4407	7"	W56RAC4414
4"	W56RAC4408	7 1/2"	W56RAC4415
4 1/2"	W56RAC4409	8"	W56RAC4416
5"	W56RAC4410	10"	W56RAC4417
5 1/2"	W56RAC4411	12"	W56RAC4418

Description

The HD ISOGARD HG / HailGard Fastener is specifically designed to be used in roofing applications where ISOGARD HG / HailGard insulation or an OSB or plywood overlay is used and fastened into 22 ga. steel*, concrete* or wood decking. The HD ISOGARD HG / HailGard bugle-head design allows the head to be installed flush with the top layer of Elevate ISOGARD HG / HailGard Composite Insulation, oriented strand board (OSB), or plywood. The HD ISOGARD HG / HailGard Fastener is also an exceptional fastener for attaching ISOGARD HG / HailGard insulation when used as a substrate for roofing shingles or metal roofing.

Method of Application

1. The Heavy-Duty ISOGARD HG / HailGard fastener has a #3 square drive type III recess in the head and comes with two #3 square drive bits in each pail. Install the fasteners using the special bit and a variable speed drill so that the top of the fastener is flush with the top of the ISOGARD HG / HailGard Composite Insulation, OSB or plywood. Care should be taken to not overdrive the fastener, which may result in damage to the cover board or stripping of the fastener in the deck. A drill with a clutch is recommended to facilitate installation.
2. Determine screw length as follows:
 - a. Steel Decks: Select fastener length to penetrate through the deck a minimum of 3/4" (19.1 mm).
 - b. Wood Decks: Select fastener length to penetrate through the deck a minimum of 1" (25.4 mm).
 - c. Concrete Decks: Select fastener length to penetrate deck a minimum of 1" (25.4 mm).
3. Steel decks 20 ga. or heavier will require pre-drilling of the deck, using a 3/16" (4.8 mm) drill bit.
4. In concrete, use a rotary hammer or hammer drill in hammer mode to drill a pilot hole with a 7/32" (5.6 mm) carbide tip masonry drill bit. The hole must be a minimum of 1/2" (12.7 mm) deeper than the final depth of the fastener. Install fasteners using a variable speed drill at a maximum of 1,500 rpm, taking care not to over or under drive the fastener.

Storage

Store in original, unopened packaging protected from the weather.

Precautions

Eye protection must be worn during the installation of the fasteners and any drilling operation.

LEED® Information

Post-Consumer Recycled Content:	25%
Pre-Consumer Recycled Content:	0%
Manufacturing Location:	Itasca, IL



NOTE: LEED® is a registered trademark of the U.S. Green Building Council

Product Packaging		
Screw Length	Thread Length	Pieces per Plastic Pail
2 ½" (50.8 mm)	1.75" (44.0 mm)	1,000
3" (76.2 mm)	2.25" (57.0 mm)	1,000
3 ½" (88.9 mm)	2.75" (69.8 mm)	1,000
4" (101.6 mm)	3" (76.2 mm)	1,000
4 ½" (114.3 mm)	4" (101.6 mm)	1,000
5" (127.0 mm)	4" (101.6 mm)	1,000
5 ½" (139.7 mm)	4" (101.6 mm)	500
6" (152.4 mm)	4" (101.6 mm)	500
6 ½" (165.0 mm)	4" (101.6 mm)	500
7" (177.8 mm)	4" (101.6 mm)	500
7 ½" (190.5 mm)	4" (101.6 mm)	500
8" (203.2 mm)	4" (101.6 mm)	500
10" (254 mm)	4" (101.6 mm)	500
12" (304.8 mm)	4" (101.6 mm)	500

Typical Properties	
Property	Typical Performance
Color	Red (PMS 185)
Material	SAE 1022, Heat Treated Steel
Thread Size	0.265" (6.7 mm) Nominal Diameter
Threads/Inch	13
Thread Design	Buttress Thread
Fastener Tip	X-Point
Fastener Head	#3 Square Drive, Type III Recess, Bugle Head design, 0.500" to 0.520" (12.7 mm to 13.2 mm) Diameter
Fastener Head Pull-Through in HailGard Composite Insulation or 7/16" OSB	400 lb (181.4 kg) Min.
Pullout in New 22 gauge (0.76 mm) Steel Deck	
Grade C (Grade 33)	595 lb (270 kg) Min.
Grade E (Grade 80)	650 lb (295 kg) Min.
Pullout in New Structural Concrete	700 lb (317.5 kg) Min.
Pullout in New ½" (12.7 mm) Plywood Deck	360 lb (163 kg) Min.

Typical Properties Continued	
Property	Typical Performance
Corrosion Resistant Coating	Red epoxy applied by Electrocoating exhibits 15% or less red rust after 30 cycles of Kesternich and exceeds requirements of FM 4470.
Material	SAE 1022, Heat Treated Steel
Thread Size	0.275" (6.98 mm) Nominal Diameter
Threads/Inch	13 min.
Thread Design	Buttress thread
Fastener Tip	Drill point design
Fastener Head	#3 Phillips drive
Pullout in New 22-gauge (0.76 mm) Steel Deck	
Grade C (Grade 33)	595 lb (270 kg) min.
Grade E (Grade 80)	650 lb (295 kg) min.
Pullout in New Structural Concrete	700 lb (317.5 kg) min.
Pullout in New 3/4" (19.0 mm) Plywood Deck	360 lb (163 kg) min.
Corrosion Resistant Coating	Electrocoating of fasteners exhibit 15% or less red rust after 30 cycles of Kesternich and exceed requirements of FM 4470.

Please contact Holcim Technical Services at 800-428-4511 for further information.

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