

TECHNICAL INFORMATION SHEET

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

Red Fasteners

2 ½"	W56RAC4405
3"	W56RAC4406
3 ½"	W56RAC4407
4"	W56RAC4408
4 ½"	W56RAC4409
5"	W56RAC4410

White Fasteners*

5 ½"	W56RAC4411
6"	W56RAC4412
6 ½"	W56RAC4413
7"	W56RAC4414
7 ½"	W56RAC4415
8"	W56RAC4416



Product Information

Description:

The Firestone 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 Firestone 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.

Product Packaging

<u>Screw Length</u>	<u>Thread Length</u>	<u>Pieces per Plastic Pail</u>
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

Method of Application:

- The Firestone 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.
- Determine screw length as follows:
 - Steel Decks: Select fastener length to penetrate through the deck a minimum of ¾" (19.1 mm).
 - Wood Decks: Select fastener length to penetrate through the deck a minimum of 1" (25.4 mm).
 - Concrete Decks: Select fastener length to penetrate deck a minimum of 1" (25.4 mm).
- Steel decks 20 ga. or heavier will require pre-drilling of the deck, using a 3/16" (4.8 mm) drill bit.

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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%

Post Industrial Recycled Content: 0%

Manufacturing Location: Itasca, IL

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



Typical Properties

<u>Property</u>	<u>Typical Performance</u>
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 1/2" (12.7 mm) Plywood Deck:	360 lb (163 kg) Min.
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.

Please contact Firestone Technical Services Department at 1-800-428-4511 for further information.

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