



**Find the Correct
Fastener for Your
Dissimilar Metal Project!**

Designing a building's exterior with dissimilar metals can render you a stunning result; but there are some precautions that need to be taken to prevent two-metal (galvanic) corrosion.

We've created this guide to help you find the fasteners you need for your dissimilar metals project.

Page

3	.....	Dissimilar Metal Fastener Guide
4 - 5	.....	Panel to Panel Fastener (1/4-14 ZAC® Impax Lap (5/16")
6 - 7	.....	Metal to Metal Fastener (#12-14 ZAC® Impax SD3 (5/16"))
8 - 9	.....	Metal to Metal Fastener (#12-24 ZAC® Impax SD4.5 & SD5)
10 - 11	.....	Metal to Wood or Metal Fastener (1/4-14 ZAC® Type AB Self-Tapping
12 - 13	.....	#14 Stainless DEKFAST DF-S4-#14
14	.....	1/4-14 410 Stainless Lap Panel to Panel Fastener
15	.....	#12-14 410 Stainless SD3 Metal to Metal Fastener
16	.....	Metal to Wood Screws (Zinc & SS Cap Heads /Stainless Steel)
17	.....	Aluminum Rivets
18	.....	Dissimilar Metals Technical Bulletin

And if you need help with your project, AEP Span is here to help you with any product or design questions you may have.

If you have any questions or need assistance, contact your AEP Span Sales or Architectural Representative.

Jeffrey Medeiros
Architectural Design Support
916-207-0385 | jeffrey.medeiros@aepspan.com

DISSIMILAR METAL FASTENER GUIDE

PANEL SUBSTRATE: ZINCALUME FINISHES

FINISHES:

- ZINCALUME® Plus
- DURA TECH™ 5000 & mx
- Vintage®
- DURA TECH™ nt (26G only)

ACCESSORIES:

- G90 Galv. Clips (standard)
- Zinc-Coated Clip Screws (standard)
- Zinc-Coated Exposed Screws (standard)
- Stainless Steel Rivets (standard)

(ALL STANDARD ACCESSORIES!)

- AEP Span's standard rivet is acceptable:
- 1/8" Pop Rivet 300 series Stainless Steel
- Standard clip and screw accessories are acceptable.
- No dissimilar metal issues.

*Please note that any unusual applications near chemicals / industrial, or swimming pools may need to be reviewed by Technical Services. If you are not sure please ask!

PANEL SUBSTRATE: ZINCALUME FINISHES

FINISHES:

- DURANAR XL PLUS / 3-Coat Coastal
- DURANAR PLUS / 2-Coat with High Build Primer (Required for <1000' to salt water)
- Zinc-Alloy Capped heavy duty SD's
- Zinc-Alloy Capped WS's
- Aluminum Rivets (special order)

ACCESSORIES:

- G90 Galv Clips (standard)
- Zinc-Coated Clip Screws (standard)
- ZAC (Zinc Aluminum Capped) Exposed
 - Zinc-Alloy Capped LAPS
 - Zinc-Alloy Capped SD's

*Recommend sending SFS spec sheets for these fasteners to customers for confirmation of selection

Standard G90 Galv. Clips and Zinc-Coated Clip Screws are less likely to have galvanic corrosion because they are concealed from the salt air.

Any fasteners that are EXPOSED to the salt air will need to be in "ZAC" fasteners (Zinc Aluminum Cap). Example, exposed fastener panel attachment.

PANEL SUBSTRATE: ALUMINUM FINISHES

FINISHES:

- DURA TECH™ 5000 & mx
- DURANAR PLUS / 2-Coat with High Build Primer

ACCESSORIES:

- G90 Galv. Clips (standard)
- Zinc-Coated Clip Screws (standard)
- Zinc-Coated Exposed Screws (standard)
- Stainless Steel Rivets (standard)

ACCESSORIES:

- Stainless Steel Clips (alternate option—in stock)
- Stainless Steel Clip Screws (alternate option—in stock) DEKFAST Stainless Steel
- Stainless Steel Exposed Screws (special order)
 - Stainless Steel LAPS
 - Stainless Steel SD's
 - Stainless Steel WS's
- Aluminum Rivets (special order)

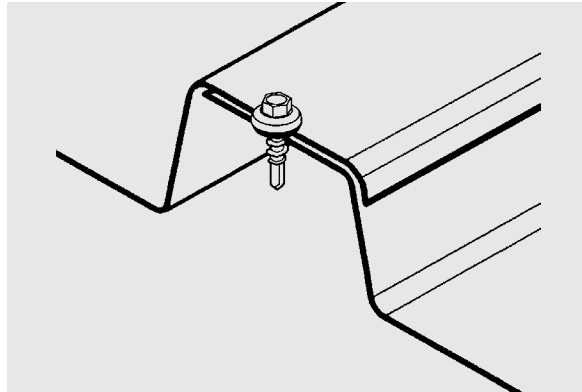
*Recommend sending SFS spec sheets for these fasteners to customers for confirmation of selection.

We already stock many accessories in Stainless Steel, but some may still need to be special ordered such as the exposed fasteners.

There will be dissimilar metal issues if you pair Aluminum panels with galvanized (standard) accessories of any kind. Use Stainless Steel (concealed or exposed) accessories.



1/4-14 ZAC[®] Impax Lap (5/16") Panel to Panel Fastener



Features and Benefits

- Zinc alloy cap head that will never red rust
- Self-drill point for fast installation
- Assembled EPDM sealing washer for a consistent weather tight seal
- Long life fastener limited warranty

Application

Panel to panel side lap, end lap, and other stitch applications

Product Selection

Material No.	Fastener Length		Thread Length*	Description	Carton Wt. (lbs.)	Carton Qty.
	(in)	(mm)				
797195	7/8"	22	Full	ZSDL-#14x7/8-CHW5/16-N	36	2,000

Plain product bagged 250 pieces, unless otherwise noted.

*Note – Thread length measured from tip of the drill point to top of the threads.

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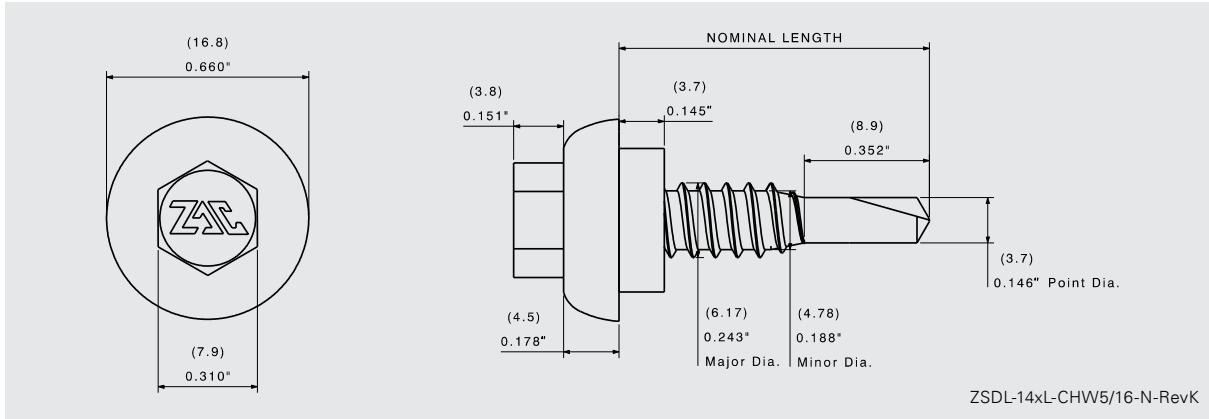
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1/4-14 ZAC[®] Impax Lap (5/16") Panel to Panel Fastener



Product Specifications

Diameter: 1/4" (6.17 mm)
 Threads Per Inch: 14
 Head Style: 5/16" dia. HWH AF (7.9 mm)
 Washer: EPDM sealing washer

Drill Point: SD1
 Drill Capacity: 0.030–0.095" (0.762 mm–2.413 mm)
 Thread Major Dia: 0.243" (6.17 mm)
 Thread Minor Dia: 0.188" (4.78 mm)

Performance Data^{1,2,3}

Material Strength

Tensile	3600 lbf / 16020 N
Shear	2700 lbf / 12015 N
Torsional	150 lbf-in / 17.0 N-m

Pull Out Strength Steel

ICC protocol 45 ksi	
22 Ga (0.8 mm)	318 lbf / 1414 N
20 Ga (0.9 mm)	412 lbf / 1832 N
18 Ga (1.2 mm)	560 lbf / 2491 N

Pull Out Strength Steel

SFS testing 56 ksi	
26 Ga (0.5 mm)	204 lbf / 907 N
24 Ga (0.6 mm)	304 lbf / 1352 N
22 Ga (0.8 mm)	379 lbf / 1686 N

¹ SFS [4812.12]

² STQA50573

³ PLK 10403

Installation and Application Considerations

Tools: 0–2000 rpm screw gun equipped with depth sensing nose piece.

Composite thickness should not exceed 0.095" (2.4 mm).

Use of impact guns or hammer drills is not recommended.

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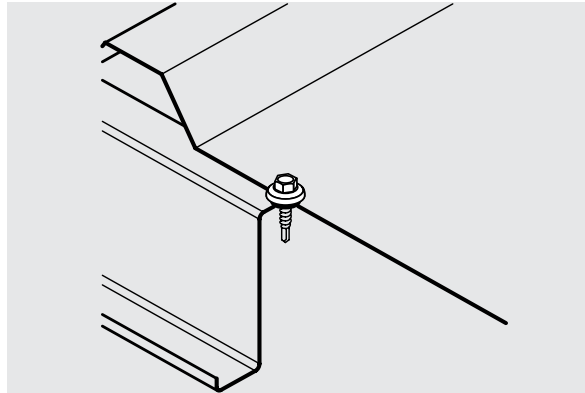
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#12–14 ZAC[®] Impax SD3 (5/16") Metal to Metal Fastener



Features and Benefits

- Zinc alloy cap head that will never red rust
- Precision cold forged assuring superior strength and the fastest drilling time performance
- Designed to have low driving and thread engagement torque and provide maximum clamp load
- Special long pilot length to accommodate nested purlins
- Assembled EPDM sealing washer for a consistent weather tight seal
- Long life fastener limited warranty

Application

Metal panel to light and medium gauge metal application

Product Selection

Material No.	Fastener Length		Thread Length*	Load Bearing Length		Description	Carton Wt. (lbs.)	Carton Qty.
	(in)	(mm)		(in)	(mm)			
794238	1"	25	Full	0.35"	9	ZSD3-#12x1-CHW5/16-N	36	2,000
1304673	1-1/4"	32	Full	0.60"	15	ZSD3-#12x1-1/4-CHW5/16-N	39	2,000
1015151	1-1/2"	38	Full	0.85"	22	ZSD3-#12x1-1/2-CHW5/16-N	32	1,500
796645	2"	51	Full	1.35"	34	ZSD3-#12x2-CHW5/16-N	25	1,000

Plain product bagged 250 pieces, unless otherwise noted.

*Note – Thread length measured from end of pilot length to end of the threads.

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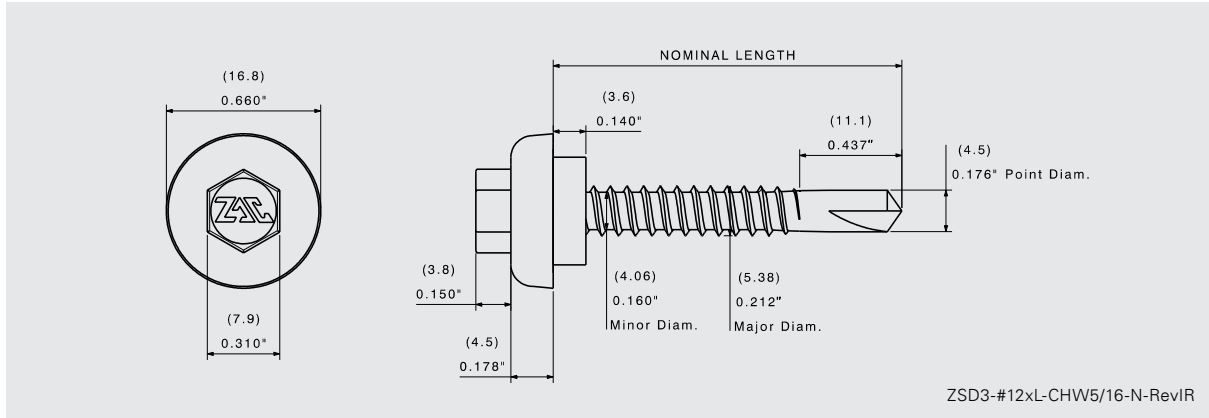
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#12–14 ZAC[®] Impax SD3 (5/16") Metal to Metal Fastener



ZSD3-#12xL-CHW5/16-N-Rev1R

Product Specifications

Diameter: #12 (5.38 mm)
 Threads Per Inch: 14
 Head Style: 5/16" dia. Zinc alloy capped HWH AF (7.9 mm)

Washer: EPDM sealing washer
 Drill Point: SD3
 Drill Capacity: 0.035"–0.210" (0.889 mm–5.334 mm)
 Thread Major Dia: 0.212" (5.38 mm)
 Thread Minor Dia: 0.160" (4.06 mm)

Performance Data^{1,2,3}

Material Strength

Tensile	2500 lbf / 11125 N
Shear	1800 lbf / 8010 N
Torsional	92 lbf-in / 10.4 N-m

Pull Out Strength Steel

	ICC protocol 45 ksi	SFS testing 56 ksi
16 Ga (1.5 mm)	482 lbf / 2144 N	665 lbf / 2958 N
14 Ga (1.9 mm)	741 lbf / 3296 N	901 lbf / 4008 N
12 Ga (2.7 mm)	1234 lbf / 5489 N	1524 lbf / 6779 N

Pull Over Strength Steel

26 Ga (0.5 mm):	654 lbf / 2909 N
24 Ga (0.6 mm):	1056 lbf / 4697 N
22 Ga (0.8 mm):	1249 lbf / 5556 N

¹ SFS [5083.14, 4812.11]

² STQA50573

³ PLK 18716

Installation and Application Considerations

Tools: 0–2000 rpm screw gun equipped with depth sensing nose piece.

Fastener length should provide for a minimum of 3/16" penetration of fully developed threads into metal substrate.

Use of impact guns or hammer drills is not recommended.

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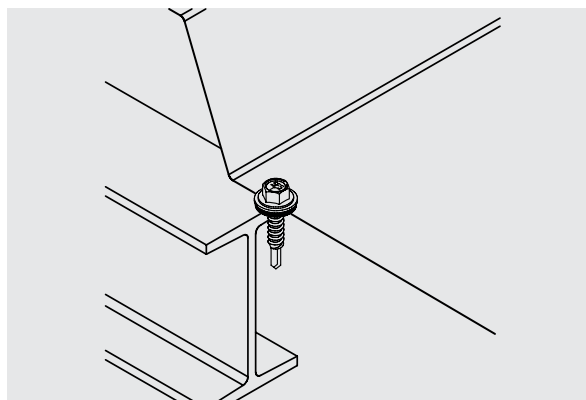
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#12-24 ZAC[®] Impax SD4.5 & SD5 Metal to Metal Fastener



Features and Benefits

- Zinc alloy cap head that will never red rust
- Precision cold forged assuring superior strength and the fastest drilling time performance
- Designed to have low driving and thread engagement torque and provide maximum clamp load
- Special long pilot lengths to accommodate nested purlins
- Assembled EPDM sealing washer for a consistent weather tight seal
- Long life fastener limited warranty

Application

Metal panel and insulated metal panel to medium and heavy gauge metal application

Product Selection

Self-Drill 4.5

Material No.	Fastener Length		Thread Length*	Load Bearing Length		Description	Carton Wt. (lbs.)	Carton Qty.
	(in)	(mm)		(in)	(mm)			
795668	1-1/4"	32	0.52"	0.40"	10	ZSD45-#12x1-1/4-CHW3/8-N	49	2,000

Self-Drill 5

Material No.	Fastener Length		Thread Length*	Load Bearing Length		Description	Carton Wt. (lbs.)	Carton Qty.
	(in)	(mm)		(in)	(mm)			
795842	1-1/4"	32	0.52"	0.40"	10	ZSD5-#12x1-1/4-CHW3/8-N	40	1,500
796622	1-1/2"	38	0.77"	0.65"	16	ZSD5-#12x1-1/2-CHW3/8-N	42	1,500

Plain product bagged 250 pieces, unless otherwise noted.

*Note – Thread length measured from end of pilot length to end of the threads.

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Customer Service Center
Tacoma, WA

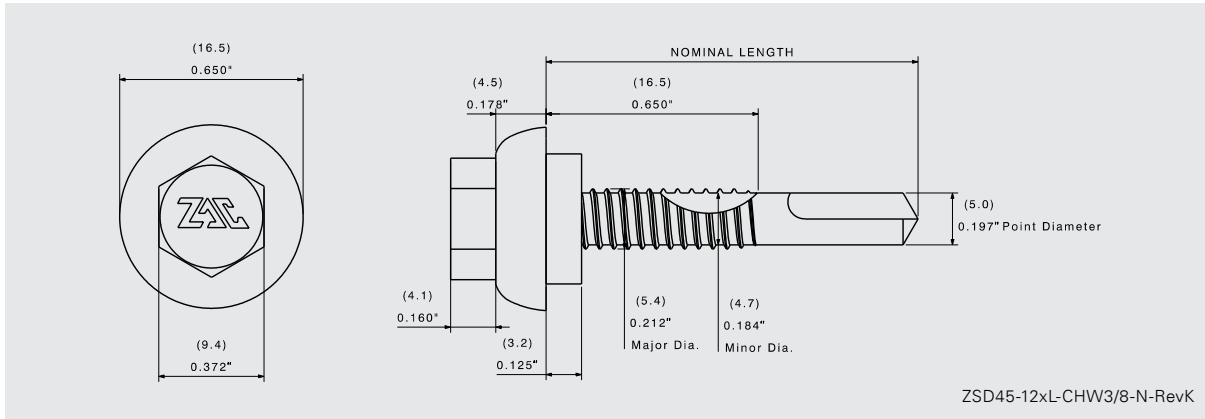
Phone: 800-733-4955

Fax: 253-272-0791

For the most current versions of literature
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#12-24 ZAC[®] Impax SD4.5 & SD5 Metal to Metal Fastener



Product Specifications

Diameter:	#12 (5.4 mm)	Drill Point:	SD4.5 or SD5
Threads Per Inch:	24	Drill Capacity SD4.5:	0.075"–0.375" (1.91–9.5 mm)
Head Style:	3/8" dia. Zinc aluminum capped HWH	SD5:	0.075–0.500" (1.91–12.7 mm)
Washer:	AF (9.4 mm) EPDM sealing washer	Thread Major Dia:	0.212" (5.4 mm)
		Thread Minor Dia:	0.184" (4.7 mm)

Performance Data^{1,2,3}

Material Strength

Tensile	3450 lbf / 15346 N
Shear	2420 lbf / 10765 N
Torsional	100 lbf-in / 11.30 N-m

Pull Out Strength Steel

	ICC protocol	SFS testing 56 ksi
12 Ga (2.7 mm)	1260 lbf ^A / 5604 N	1378 lbf / 6130 N
3/16" (4.7 mm)	2989 lbf ^B / 13295 N	Exceeds tensile
1/4" (6.4 mm)	Exceeds tensile ^B	Exceeds tensile

Pull Over Strength Steel

26 Ga (0.5 mm)	794 lbf / 3532 N
24 Ga (0.6 mm)	1310 lbf / 5827 N
22 Ga (0.8 mm)	1647 lbf / 7326 N

Note A: 45 ksi. Note B: 58 ksi.

¹ SFS [5509.18]

² STQA50573

³ PLK 10303

Installation and Application Considerations

Tools: 0–2000 rpm screw gun equipped with depth sensing nose piece.

Fastener length should provide for a minimum of 3/16" penetration of fully developed threads into metal substrate.

Use of impact guns or hammer drills is not recommended.

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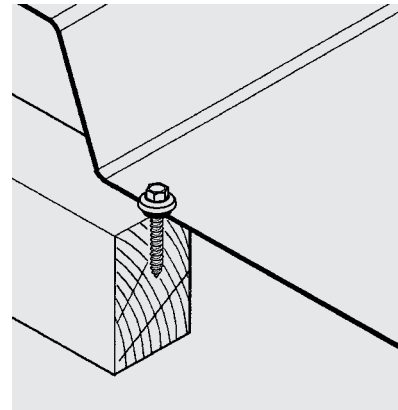
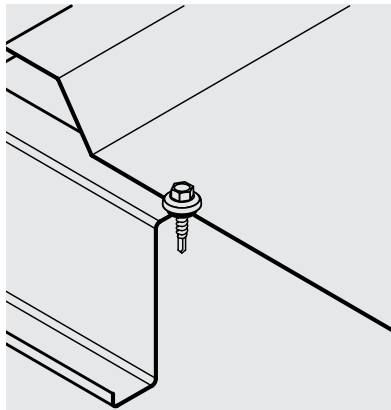
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1/4-14 ZAC[®] Type AB Self-Tapping Metal to Wood or Metal Fastener



Features and Benefits

- Zinc alloy cap head that will never red rust
- Assembled EPDM sealing washer for a consistent weather tight seal
- Long life fastener limited warranty

Application

Metal panel to medium metal applications or metal panel to wood applications

Product Selection

Material No.	Fastener Length		Thread Length*	Metal to Metal Load Bearing Length		Description	Carton Wt. (lbs.)	Carton Qty.
	(in)	(mm)		(in)	(mm)			
784403	1"	25	Full	0.57"	15	ZTABMP-#14x1-CHW3/8-N	44	2,000
784552	1-1/2"	38	Full	1.07"	27	ZTABMP-#14x1-1/2-CHW3/8-N	42	1,500
784691	2"	51	Full	1.57"	40	ZTABMP-#14x2-CHW3/8-N	33	1,000
784654	2-1/2"	64	Full	2.07"	53	ZTABMP-#14x2-1/2-CHW3/8-N	38	1,000

Plain product bagged 250 pieces, unless otherwise noted.

*Note – Thread length measured from tip of point to top of the threads.

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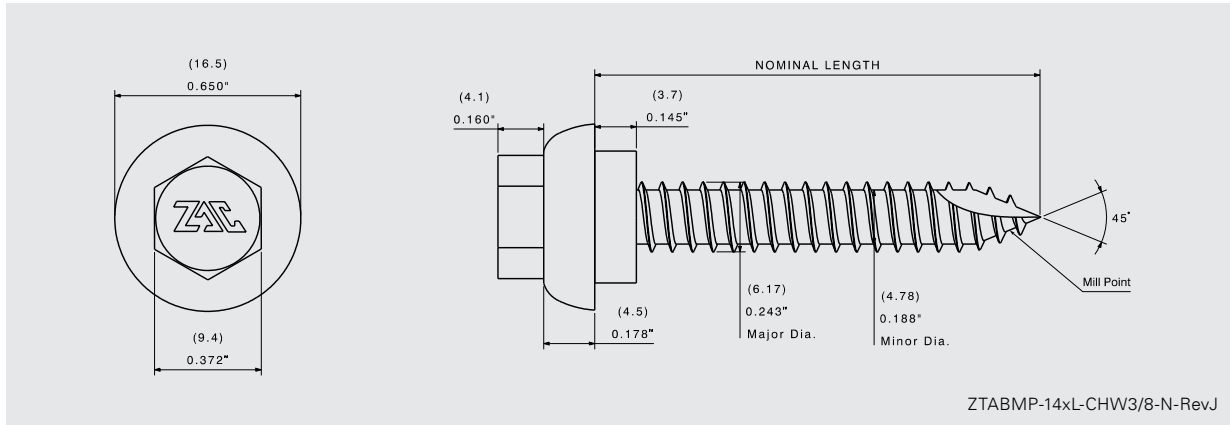
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1/4-14 ZAC[®] Type AB Self-Tapping Metal to Wood or Metal Fastener



Product Specifications

Diameter:	1/4" (6.17 mm)	Drill Point:	Type AB Milled Point
Threads Per Inch:	14	Drill Capacity:	0.044"–0.110" (1.12 mm - 2.79 mm)
Head Style:	3/8" dia. HH AF (9.4 mm)	Thread Major Dia:	0.243" (6.17 mm)
Washer:	EPDM sealing washer	Thread Minor Dia:	0.188" (4.78 mm)

Performance Data^{1, 2, 3}

Material Strength	Pull Out Strength Steel		Pull Out Strength Wood	
	Tensile	3800 lbf / 16903 N	16 Ga (1.5 mm): 879 lbf / 3910 N	SPF 1" penetration	697 lbf / 3100 N
Shear	2560 lbf / 11387 N	14 Ga (1.9 mm): 1277 lbf / 5680 N	SPF 1-1/2" penetration	1038 lbf / 4617 N
Torsional	142 lbf-in / 16.04 N-m	12 Ga (2.7 mm): 2185 lbf / 9719 N		

Pull Over Strength Steel

26 Ga (0.5 mm):	616 lbf / 2740 N
24 Ga (0.6 mm):	884 lbf / 3932 N
22 Ga (0.8 mm):	1079 lbf / 4799 N

¹ Pull out values based on 45 ksi cold formed sheet metal.
² SFS 5625.19, 4812.11, 4381.07, 5057.19
³ S-120, SB3

Installation and Application Considerations

Tools: Metal to metal application: 0–1000 rpm screw gun equipped with depth sensing nose piece. Metal to wood application: 0–2500 rpm screw gun equipped with depth sensing nose piece.

Use of impact guns or hammer drills is not recommended.

Self-drilling metal thickness: sheet 0.018"–0.030" (0.46 mm–0.72 mm)

Special care needs to be taken when installing #14 ZAC Type AB fasteners into wood substrate less than 1" in thickness. Stripping or partially stripping the fastener out during installation compromises the clamp load and can affect the performance of the fastener.

Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total. Minimum depth penetration into wood substructure: 1" (25.4 mm)

Metal thickness	Drill bit size
0.021"–0.026" (0.53 mm–0.66 mm)	1/8" (3.18 mm)
0.027"–0.050" (0.69 mm–1.27 mm)	5/32" (3.97 mm)
0.051"–0.075" (1.29 mm–1.9 mm)	#8 (5.05 mm)
0.075"–0.110" (1.9 mm–2.79 mm)	#7 (5.11 mm)

The hole size determines installation performance and pull out strength.

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#14 Stainless DEKFAST™ DF-S4-#14



Features and Benefits

- 410 stainless steel provides resistance to corrosion in mild to light industrial environments
- Extra stable #3 Phillips drive
- Low profile truss head
- 13 threads per inch provides higher pull-out values

Application

Insulation and membrane attachment to steel or wood in a corrosive environment

Product Selection

Material No.	Fastener Length	Thread* Length	Description	Carton Wt. (lbs.)	Carton Qty.
791371	1-1/2"	Full	DF-S4-#14x1-1/2-PH3-B	14	1,000
791373	2"	Full	DF-S4-#14x2-PH3-B	18	1,000
791376	3"	2-7/8"	DF-S4-#14x3-PH3-B	25	1,000
791379	4"	3-7/8"	DF-S4-#14x4-PH3-B	32	1,000
791381	5"	3-7/8"	DF-S4-#14x5-PH3-B	39	1,000
791383	6"	3-7/8"	DF-S4-#14x6-PH3-B	46	1,000
791385	7"	3-7/8"	DF-S4-#14x7-PH3-B	27	500
791387	8"	3-7/8"	DF-S4-#14x8-PH3-B	30	500
791389	10"	3-7/8"	DF-S4-#14x10-PH3-B	39	250
1298264	12"	3-7/8"	DF-S4-#14x12-PH3-B	48	250

*Note – Thread length measured from tip of the drill point to end of the threads.

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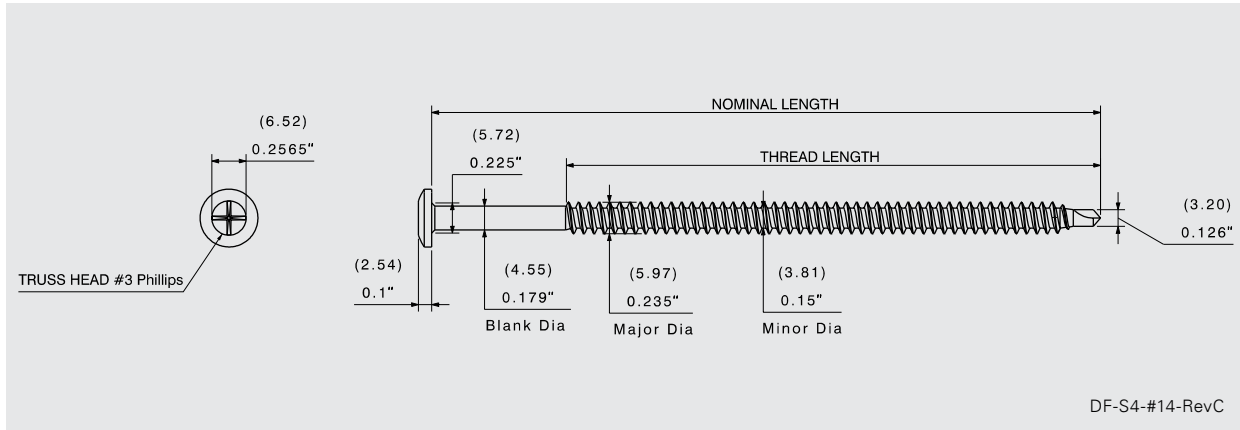
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Tacoma, WA

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#14 Stainless DEKFAST™ DF-S4-#14



Coating and Corrosion

15/15 Kesternich per FM 4470
950 hour salt spray per ASTM B117
Passivated stainless finish

Approvals



State of Florida: FL20311

Performance Data^{1,2,3}

Material Strength

Tensile	4000 lbf / 17793 N
Shear	2800 lbf / 12455 N
Torsional	100 lbf·in / 11.30 N·m

Pull Out Strength Steel

22 Ga Grade 40 steel (0.8 mm):	428 lbf / 1904 N
22 Ga Grade 80 steel (0.8 mm):	568 lbf / 2527 N

Pull Out Strength Wood

19/32" (15.1 mm) FR Plywood (through penetration):	552 lbf / 2455 N
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¹ SFS-SC12250.10.17

² SFS 5509.18

³ PLK Standard

Installation and Application Considerations

Tools: 2000–2500 rpm screw guns with hardened #3 Phillips bit. The standard carton package includes one #3 Phillips bit. Not recommended for use in heavy industrial or marine environments, including swimming pool enclosures. For these applications, contact SFS for a stainless fastener recommendation.

Material:

- Steel thickness from 22 ga (0.030 in.) through 18 ga (0.048 in.); Min penetration: 3/4"
- Wood 2x (1–1/2" thick): Min penetration: 1"
- Plywood and OSB: Min through penetration: 3/4"

Use with:

- Stress plates
- Batten bar
- Other attachment elements approved by the roofing system manufacturer for use with its products.

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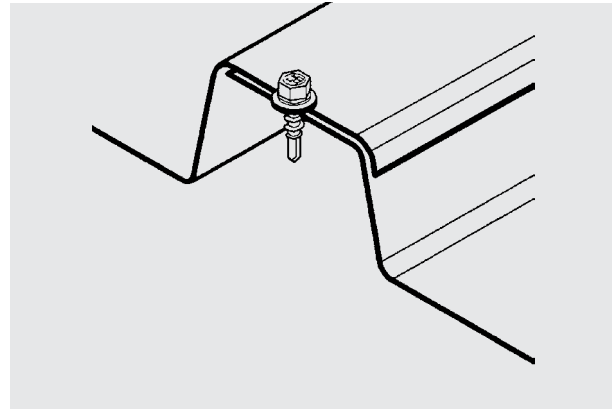
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1/4-14 410 Stainless Lap Panel to Panel Fastener



Features and Benefits

- 410SS provides resistance to corrosion in mild to light industrial environments
- High hex washer head provides driving stability
- Self-drill point for fast installation
- Available with no sealing washer or with aluminum bond seal washer

Application

Panel to panel side lap, end lap, and other stitch applications

Product Selection

Material No.	Fastener Length		Thread Length*	Load Bearing Length		Description	Carton Wt. (lbs.)	Carton Qty.
	(in)	(mm)		(in)	(mm)			
791283	7/8"	22	Full	0.31"	8	SDL-S4-#14x7/8-HW5/16-AB19/32	38	2,500

Plain product bagged 250 pieces, unless otherwise noted.

*Note – Thread length measured from tip of the drill point to top of the threads.

Installation and Application Considerations

Tools: 0–2000 rpm screw gun equipped with depth sensing nose piece.

Composite thickness should not exceed 0.095" (2.4 mm).

Use of impact guns or hammer drills is not recommended.

US
T 800 234 4533
us.sfs.com

Canada
T 866 847 5400
ca.sfs.com

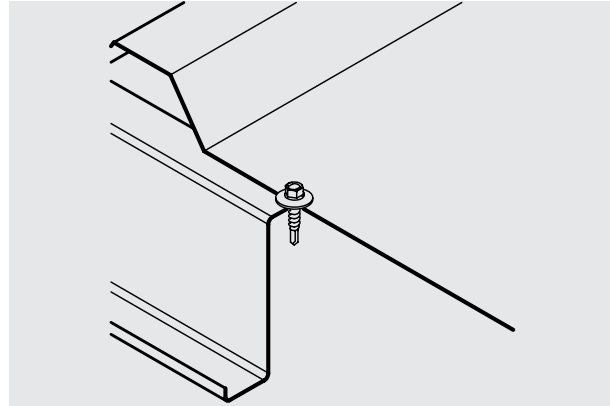
Metric values are approximate conversions.

All information is non-binding and without guarantee. Before using the products, all specifications and calculations must be checked by a suitably qualified person and local regulations must be observed. This document is subject to revision. We reserve the right to make technical changes. (06/2021, V1.01)

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#12-14 410 Stainless SD3 Metal to Metal Fastener



Features and Benefits

- 410SS provides resistance to corrosion in mild to light industrial environments
- Precision cold forged point assuring superior strength and the fastest drilling time performance
- Designed to have low driving and thread engagement torque and provide maximum clamp load
- Available with no sealing washer or with aluminum bond seal washer

Application

Metal panel to light and medium gauge metal application

Product Selection

Material No.	Fastener Length		Thread Length*	Load Bearing Length		Description	Carton Wt. (lbs.)	Carton Qty.
	(in)	(mm)		(in)	(mm)			
791271	1"	25	Full	0.35"	9	SD3-S4-#12x1-HW5/16-AB19/32	31	2,500
791315	1-1/4"	32	Full	0.60"	15	SD3-S4-#12x1-1/4-HW5/16-AB19/32	38	2,500
791340	1-1/2"	38	Full	0.85"	22	SD3-S4-#12x1-1/2-HW5/16-AB19/32	34	2,500

Plain product bulk carton packed.

*Note – Thread length measured from end of pilot length to end of the threads.

Installation and Application Considerations

Tools: 0–2000 rpm screw gun equipped with depth sensing nose piece.

Fastener length should provide for a minimum of 3/16" penetration of fully developed threads into metal substrate.

Use of impact guns or hammer drills is not recommended.

US
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ca.sfs.com

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Customer Service Center
Tacoma, WA

Phone: 800-733-4955

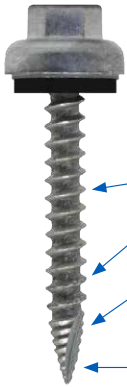
Fax: 253-272-0791

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please visit www.aepspan.com



METAL-TO-WOOD SCREWS Zinc & SS Cap Heads | Stainless Steel

FOR WARRANTED SYSTEMS & LONG-LIFE PERFORMANCE



PANEL-TITE® BURR BUSTER ZH
Zinc Die Cast Head

- Use on 20yr warranty roof systems.
- Carbon steel shank with TRI-SEAL® coating.
- Provides outstanding corrosion protection.

LOW ANGLE THREAD
Resists Loosening

SAW TOOTH THREAD
Lower Tapping Torque

MILLED SLOT
Penetrates Fast

BURR BUSTER® POINT
Reduces Burrs and Chips

Penetrates up to 20ga Steel

Also available:
Stainless Cap Head
with Flange Sealer



PANEL-TITE® BURR BUSTER SS
304 Stainless Steel

- 304 SS BONDSEALER washer
- Used in aluminum applications.
- Preferred screw for treated lumber.

Penetrates Steel up to 20 ga.

Bagged 250pcs

*Patented Anti-burr Thread and Point Technology!**

#10-12 ZINC CAP HEAD | 5/16" HWH
Washer: .565" Dia. / Aluminum to EPDM



ZINC CAP HEAD | TRI-SEAL® LONG-LIFE COATED

Size	Part #	Box Qty	List Price
#10-12 x 1" Burr Buster	10100HWBB17CSTSZ	4,000	
#10-12 x 1-1/2" Burr-Buster	10150HWBB17CSTSZ	2,500	
#10-12 x 2" Burr Buster	10200HWBB17CSTSZ	2,000	
#10-12 x 2-1/2" Burr Buster	10250HWBB17CSTSZ	1,500	
#10-12 x 3" Burr Buster	10300HWBB17CSTSZ	1,000	

#10-12 STAINLESS CAP HEAD | 1/4" HWH
Washer: .500" Dia. Undercut / EPDM Washer



STAINLESS STEEL CAP HEAD | TRI-SEAL® LONG-LIFE COATED

Size	Part #	Box Qty	List Price
#10-12 x 1" Burr Buster	10100HWBB17CSTSC	4,000	
#10-12 x 1-1/2" Burr-Buster	10150HWBB17CSTSC	2,500	
#10-12 x 2" Burr Buster	10200HWBB17CSTSC	2,000	
#10-12 x 2-1/2" Burr Buster	10250HWBB17CSTSC	1,000	
#10-12 x 3" Burr Buster	10300HWBB17CSTSC	1,000	
#12-14 x 1-1/2" Type 17	12150HW17CSTSSC	1,500	
#14-10 x 3-1/2" Type 17	14350HW17CSTSSC	1,000	

#12-14 HIGH LOW TYPE 17 STAINLESS CAP HEAD | 5/16" HWH
Washer: .570" Dia. Undercut / EPDM Washer



#14-10 STAINLESS CAP HEAD | 5/16" HWH
Washer: .570" Dia. Undercut / EPDM Washer



*Attach metal panels with a 1-1/2"- 2" high rib height.
Great for replacing screws that are stripped!*

#10-12 304 STAINLESS STEEL
Washer: Stainless Steel



Diameter & Point: #10-12
Material: 304 Stainless Steel
Plating: Passivated & TRI-SEAL®
Head Style: 1/4" HWH
Thread: #10-12 Single Lead

304 STAINLESS STEEL | PASSIVATED & TRI-SEAL® COATED

Size	Part #	Box Qty	List Price
#10-12 x 1" Burr Buster	10100HWBB17S34BW	3,000	
#10-12 x 1-1/2" Burr Buster	10150HWBB17S34BW	2,500	
#10-12 x 2" Burr Buster	10200HWBB17S34BW	2,000	
#10-12 x 2-1/2" Burr Buster	10250HWBB17S34BW	1,500	

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***Pat. No.:** 11,105,362

TRIANGLE FASTENER CORPORATION

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Visit our website for the most up-to-date product and technical information!

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Tacoma, WA

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ALUMINUM RIVET INFO

		TRIANGLE FASTENER CORPORATION <i>Fastening systems and solutions for the commercial construction industry</i>						
		Aluminum Rivet	Aluminum Mandrel	Open End				
1/8" (.125)	#30 (.129-.133)	.250	.040	.212 (5.4)	.032-.062 (0.8-1.6)			
3.2	3.3 (3.28-3.38)	6.35	1.02	.275 (7.0)	.063-.125 (1.7-3.2)			
				.337 (8.6)	.126-.187 (3.3-4.8)			
				.400 (10.2)	.188-.250 (4.9-6.4)	150	180	
				.462 (11.7)	.251-.312 (6.5-7.9)	660	800	
				.525 (13.4)	.313-.375 (8.0-9.5)			
				.650 (16.5)	.376-.500 (9.6-12.7)			
				.775 (19.7)	.501-.625 (12.8-15.9)			

**GET-A-GRIP™
PAINTED RIVETS**

**Kalida-Kote™
In-House Painting
Available For Custom
Color Matching, Fast!**



250 Minimum Order Requirement
In-Stock Colors #42—#43—#44

- | | | |
|---------------|----------------|-----------------|
| Aged Copper | Dark Bronze | Sage |
| Almond | Desert Sand | Sahara Tan |
| Ash Gray | Emerald Green | Sierra Tan |
| Aztec Gold | Fern Green | Seaport |
| Banner Red | Hartford Green | Slate Blue |
| Bone White | Hawaiian Blue | Slate Gray |
| Burnish Slate | Light Stone | Snow White |
| Cape Clue | Mansard Brown | Snowdrift White |
| Charcoal Gray | Matte Black | Stone White |
| Cherokee Blue | Medium Bronze | Teal Green |
| Classic Green | Musket Gray | Terra Cotta |
| Cocoa Brown | Pacific Blue | Winter Blue |
| Colonial Red | Polar White | |
| Colony Green | Red Clay | |
| Copper Penny | Roman Bronze | |
| Cordovan | Royal Blue | |
| Country Red | Rustic Red | |

AEP SPAN TECHNICAL BULLETIN DISSIMILAR METALS



INTRODUCTION

AEP Span's steel-based products, painted and bare, feature a metallic-coating that provides long-lasting resistance from corrosion. This coating is applied during the steel production process prior to the application of paint. Metallic-coatings consist of either zinc (sold as TruZinc® or galvanized) or a specialty mix of aluminum and zinc (sold as ZINCALUME®). Care must be taken during the design and installation phase of metallic-coated products to avoid the unintentional creation of galvanic corrosion. This rapid form of corrosion is induced when metals of varying types (dissimilar metals) are installed in direct contact with one another in a **corrosive environment**.

GALVANIC CORROSION

Galvanic or bi-metallic corrosion is a reaction in which one metal will sacrifice itself (or dissolve) to protect the different, less active metal, leading to visible corrosion. Galvanic corrosion occurs between dissimilar metals in certain **corrosive environments** and typically requires three criteria in which to occur:

1. Two or more dissimilar metals,
2. Metal to metal contact, and
3. Both metals to reside in the same conducting solution/**corrosive environment**, i.e. salt air or water.

Metals can be viewed as active or noble based on their position on the galvanic scale, simplified in Table 1 below. The further apart these metals are on this scale, the greater the potential for a reaction between the metals. In addition to the dissimilarity of the metals, the severity of the environment will influence the potential for galvanic corrosion. Common factors influencing environmental severity can include direct proximity to salt water or chemical spray, the frequency of breaking surf (which generates airborne salt-laden particulates), and how frequently the surface is rinsed by rainfall.

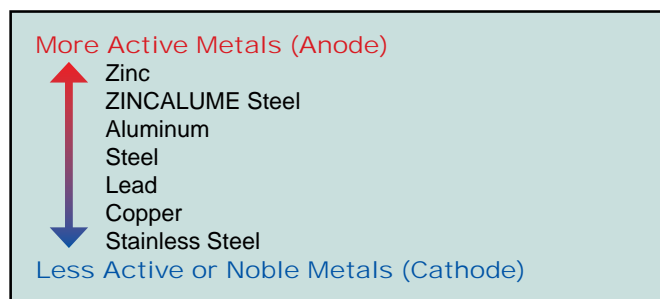


Table 1: **Galvanic Series of Metallic Activity**

IN APPLICATION

Installations featuring galvanic corrosion are commonly attributed to improper fastener and accessory selection. This includes the use of stainless steel and copper products in direct contact with metallic-coated metal roofing and siding profiles.

Stainless-Steel Hardware (Clips, Fasteners, etc)
Galvanic corrosion can be caused by stainless-steel fasteners, rivets, light fixtures, window frames and other accessories recessed in metallic-coated panels in **corrosive environments**.

Initially this may appear as the apparent bubbling of the painted metal roof or siding surface around the stainless-steel fixture. Often falsely identified as a paint failure, this bubbling is the steel underneath corroding, resulting in the loss of paint adhesion.

AEP Span's stainless-steel hardware offering, such as clips and fasteners, are not intended to be used with ZINCALUME coated steel profiles in **corrosive environments**. In these environments stainless steel components should be used in conjunction with profiles fabricated out of aluminum.

Copper and Copper Treated Lumber
Metallic coated steel will experience accelerated corrosion when it is in contact with copper, this includes copper treated lumber. Leeching of copper from treated materials, such as through water run-off from rainfall or condensation, can result in corrosion without direct metal to metal contact. In these instances, the protective oxide film which naturally forms on aluminum-zinc coatings is broken down by copper in localized areas. Pitting corrosion ensues which is a highly accelerated form of attack. Zinc coatings are not generally subject to pitting but will demonstrate the effects of galvanic corrosion when installed in direct contact with copper.

AEP Span recommends avoiding the use of copper where galvanic corrosion may be a concern. If the use of copper cannot be avoided, AEP Span recommends that insulated copper or a protective coating over the copper be used to prevent exposure. Any electrical terminals that utilize exposed copper should also be sealed with shrink tape or similar method This includes but is not limited to grounding wire for Photo Voltaic Arrays, Lightning Protection, and Pipe Penetrations.

Galvanized Steel and ZINCALUME Coated Steel
Unpainted galvanized steel must not be used for roofing or rainwater goods (including valleys and gutters) to collect water runoff from ZINCALUME Steel or other more noble metals. ZINCALUME Steel and painted ZINCALUME Steel can be used to collect water from galvanized catchment material. Irrespective of galvanic corrosion considerations, ZINCALUME Steel panels & gutters will typically give a longer service life than traditional galvanized steel. Neither product should be used as catchment material for roofs featuring more noble metals such as aluminum or copper.

WARRANTY IMPLICATIONS AND REMEDY

Product deterioration or corrosion created by the improper installation of dissimilar metals will void any warranty supplied by AEP Span. This includes product performance, paint system, and corrosion warranties.

If galvanic corrosion is identified, this issue must be rectified as promptly as possible due to the rapid rate at which it can spread. Remedies may include the replacement of the panels impacted by corrosion and the substitution or relocation of the associated dissimilar metals. For more information on the identification or rectification of galvanic corrosion, **please contact AEP Span**.



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