Bi-Met 300® fasteners

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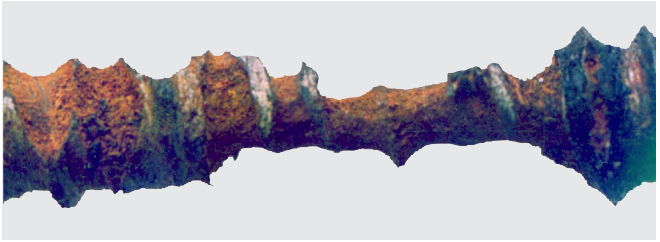
Corrosion in construction can be catastrophic

Corrosion is the tendency of metals to change from their pure, unstable form back to the more stable, metallic oxides commonly found in the ground as ore. Fastener corrosion not only produces a loss of visual harmony, but corrosion of construction fastening systems can lead to the catastrophic failure of a building's critical elements.

All metals have potential to corrode due to
- High moisture or wet conditions
- Dissimilar metals reaction
- Polluted environments
- Loss of protective coating by abrasion or mechanical damage
- Differing oxygen concentrations
- Saline moisture content



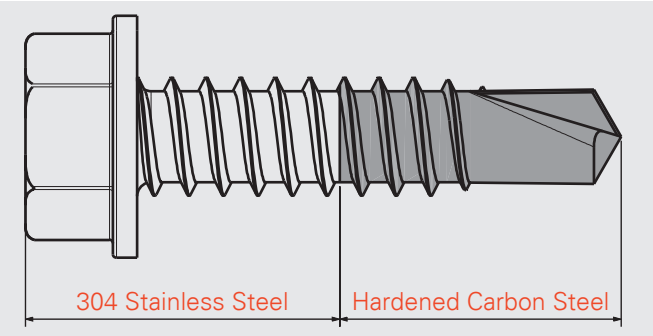
It is the loss of structural integrity and performance that may lead to catastrophic failure, due to
- Decreased pull-out values
- Decreased pull-over values
- Decrease of shear value
- Loss of tensile strength

The Solution–Bi-Met 300® fasteners

Only austenitic stainless steel fasteners (300 series) can be classified as "long life" to a minimum building design life of 30 years. But, the drill point of a stainless steel fastener is softer than a hardended carbon steel point.

Bi-Met 300® self-drilling fasteners are made from both 300 series stainless steel and alloy steel that are welded together in a process that was pioneered by SFS. This allows the fasteners to drill and tap threads into steel panels and substrates while maintaining the superior corrosion resistance of 300 series stainless steel.

The benefits of the stainless steel also include increased ductility compared to a standard self-drilling fastener that will prevent delayed embrittlement failures in dissimilar metal applications such as aluminum to steel attachments. All applications are critical. For a reliable way of fundamentally avoiding the problems associated with corrosion and at the same time allowing for the most efficient installation, the Bi-Met 300® fasteners are the right choice.



Application
- Curtain wall applications
- Rainscreen and cladding
- Dissimilar metal applications when used with aluminum
- Applications requiring superior corrosion resistance
- Metal panel attachment (washers available by request)
- Fenestration Systems

#10 and #12 Diameter Bi-Met 300®

Product Selection — #10-16 Bi-Met 300® SD2

Material No.	Fastener Length (in)	Fastener Length (mm)	Load Bearing Area (in)	Load Bearing Area (mm)	Description	Carton Wt. (lbs.)	Carton Qty.
1702003	3/4"	19	.350"	9	BMSD2-S3-#10x3/4-HW5/16-F	31	5000
1702004	1"	25	.600"	15	BMSD2-S3-#10x1-HW5/16-F	35	5000
1702005	1-1/2"	38	1.100"	28	BMSD2-S3-#10x1-1/2-HW5/16-F	26	2500

Product Selection — #12-14 HWH Bi-Met 300® SD3

Material No.	Fastener Length (in)	Fastener Length (mm)	Load Bearing Area (in)	Load Bearing Area (mm)	Description	Carton Wt. (lbs.)	Carton Qty.
1702006	1"	25	.510"	13	BMSD3-S3-#12x1-HW5/16-F	28	2500
1702007	1-1/4"	32	.760"	19	BMSD3-S3-#12x1-1/4-HW5/16-F	32	2500
1702008	1-1/2"	38	1.010"	26	BMSD3-S3-#12x1-1/2-HW5/16-F	37	2500
1702009	2"	51	1.440"	36	BMSD3-S3-#12x2-HW5/16-F	36	2000

Product Selection — #12-24 HWH Bi-Met 300® SD5

Material No.	Fastener Length (in)	Fastener Length (mm)	Load Bearing Area (in)	Load Bearing Area (mm)	Description	Carton Wt. (lbs.)	Carton Qty.
1702010	1-1/2"	38	.690"	17	BMSD5-S3-#12x1-1/2-HW5/16-F	39	2500

Product Selection — #12-14 Bi-Met 300® Pancake SD3

Material No.	Fastener Length (in)	Fastener Length (mm)	Load Bearing Area (in)	Load Bearing Area (mm)	Description	Carton Wt. (lbs.)	Carton Qty.
1702024	1"	25	.510"	13	BMSD3-S3-#12x1-PC-SQ2-F	22	2500

Coating and Corrosion

VistaCoat® – Proprietary coating system to provide a galvanic barrier between stainless steel fastener and aluminum panels or substrates
Vista Spray – Color matched paint available by request
Fastener material/load bearing area – 304 Stainless steel

Ultimate Values – Pull-out (lbf) steel

			Substrate thickness						
Screw Size	Point Size	Drill Capacity	20ga	18ga	16ga	14ga	12ga	3/16"	1/4"
#10-16	SD2	.105"	283	513	601	872	1449	–	–
#12-14	SD3	.210"	295	575	627	1033	1478	–	–
#12-24	SD5	.500"	–	–	–	733	1384	2181	2910

Ultimate values have not been evaluated statistically and do not have any safety factors applied.

1/4" Diameter Bi-Met 300®

Product Selection — 1/4-14 HWH Bi-Met 300® SD2

Material No.	Fastener Length (in)	Fastener Length (mm)	Load Bearing Area (in)	Load Bearing Area (mm)	Description	Carton Wt. (lbs.)	Carton Qty.
1557694	1"	25	.470"	12	BMSD2-S3-#14x1-HW3/8-F	32	2000
1557696	1-1/2"	38	.970"	24	BMSD2-S3-#14x1-1/2-HW3/8-F	30	1500
1557698	2"	51	1.440"	37	BMSD2-S3-#14x2-HW3/8-F	25	1000

Product Selection — 1/4-20 HWH Bi-Met 300® SD4

Material No.	Fastener Length (in)	Fastener Length (mm)	Load Bearing Area (in)	Load Bearing Area (mm)	Description	Carton Wt. (lbs.)	Carton Qty.
1558132	1-1/8"	29	.380"	9	BMSD4-S3-#14x1-1/8-HW3/8-F	34	2000
1558133	1-1/2"	38	.720"	18	BMSD4-S3-#14x1-1/2-HW3/8-F	30	1500
1558134	2"	51	1.200"	30	BMSD4-S3-#14x2-HW3/8-F	25	1000

Product Selection — 1/4-20 HWH Bi-Met 300® SD5

Material No.	Fastener Length (in)	Fastener Length (mm)	Load Bearing Area (in)	Load Bearing Area (mm)	Description	Carton Wt. (lbs.)	Carton Qty.
1558130	2"	51	.940"	24	BMSD5-S3-#14x2-HW3/8-F	16	1000
1558131	4"	102	2.970"	75	BMSD5-S3-#14x4-HW3/8-F	15	500

Coating and Corrosion

VistaCoat® – Proprietary coating system to provide a galvanic barrier between stainless steel fastener and aluminum panels or substrates
Vista Spray – Color matched paint available by request
Fastener material/load bearing area – 304 Stainless steel

Approvals

CODE COMPLIANCE ETL US Intertek CCRR-0387

Listed on Intertek CCRR-0387 report
Evaluated per ICC-ES AC118 and AC491

Allowable Design Values – Pull-out (lbf) steel

			Substrate Thickness									
Screw Size	Point Size	Drill Capacity	20ga	18ga	16ga	14ga	12ga	1/8"	3/16"	1/4"	5/16"	3/8"
1/4-14	SD2	.105"	119	155	258	355	471	–	–	–	–	–
1/4-20	SD4	.312"	–	–	228	369	594	749	1230	1703	–	–
1/4-20	SD5	.500"	–	–	–	–	–	–	–	1653	1506	1506

Design values have been independently evaluated per ICC standards and all safety factors required by code have already been applied. This applies exclusively to 1/4" diameters

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Metric values are approximate conversions.