

Awning Works Inc

Dissimilar Metals Specification

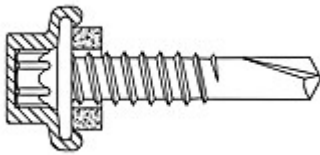
CSI- Division 10

Hardware for attaching dissimilar metals

When attaching steel to aluminum ie. Galvalume or Corrugated steel standing seam panels to a welded aluminum frame, use the Zinc Aluminum Capped Head below fastener to prevent a corrosive reaction that could take place when the metals come in contact over a long period of time

Metal Alloy Capped Fasteners

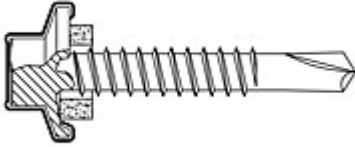
ZAC® Zinc Aluminum Capped Head



ZAC design fasteners provide the corrosion resistance of a zinc-aluminum alloy capped head on a hardened steel fastener for self-drilling or self-tapping installation. ZAC is the original capped zinc-aluminum head fastener and is used in more metal buildings than any other capped fastener.

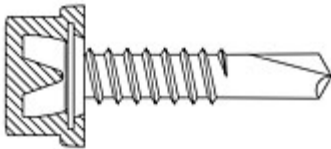
ZAC design fasteners are available with a 5/16" and 3/8" capped hex washer head in Impax™ self-drilling fasteners, Woodgrip™ sheet-to-wood fasteners and self-tapping screws.

MAC™ Stainless Capped Head Self-Drilling Fasteners



MAC stainless capped head design combines the corrosion resistance of stainless steel and a hardened steel fastener for self-drilling installation. MAC design fasteners [link to PDF 121,140 TBD] are available with a 5/16" capped hex washer head in a wide selection of Woodgrips and Impax self-drilling fasteners.

Prisma™ Nylon Head Self-Drilling and Self-Tapping Fasteners



Prisma design fasteners [link to pdf 121,140 TBD] combine the corrosion resistance of a nylon-molded head with a hardened steel fastener for self-drilling and self-tapping installation. The nylon head is formulated with the color built in. It naturally resists fading and will never rust like steel headed fasteners. Prisma design fasteners are available with 3/8" and 7/16" hex washer heads in self-drillers, Woodgrip metal-to-wood fasteners, and self-tapping AB fasteners.

Stainless Steel Fasteners

A commonly held belief that stainless steel will not rust or corrode is not necessarily accurate. Stainless steel is a generic term covering over 200 different types of alloys that, to varying degrees, corrode less than carbon steel. It is important that a specifier be aware of the panel and project performance expectations when specifying stainless steel fasteners.

Several types of stainless steel are used for fasteners.

300 Series Stainless/Austenitic

- 18-8 stainless alloy with 18% chromium and 8% nickel
- Best known grades are 304 and 316, both work hardened in the thread-rolling process to manufacture a self-tapping fastener capable of tapping threads into steel
- Can be manufactured as a self-drilling, bi-metal fastener by incorporating a heat-treated hardened carbon steel drill point joint welded to the austenitic stainless fastener
- Nonmagnetic
- Provides excellent corrosion resistance compared to martensitic 410SS fasteners and plated steel fasteners
- Austenitic stainless steel is considered the only type of stainless steel for panel fasteners

410 Series Stainless/Martensitic

- Stainless alloy with 11.5% to 13.5% chromium
- Can be heat treated to provide hardness to manufacture as self-tapping or self-drilling fasteners (when hardened, the part has less corrosion resistance)
- Poor corrosion resistance compared to austenitic stainless
- Magnetic
- Plated to improve corrosion resistance (like carbon steel fasteners)
- Martensitic stainless is not considered suitable for panel fasteners

Bi-Metal Fasteners

SX design fasteners combine the corrosion resistance of an austenitic 300 series stainless head and threaded shank with a hardened carbon steel point for self-drilling installation. These bi-metal fasteners install like carbon steel fasteners and provide the corrosion resistance of 18-8 300 series austenitic stainless. SX fasteners are true stainless steel self-drilling fasteners.

When selecting a stainless steel fastener for any application where minimizing or virtually eliminating corrosion is the goal, a specifier should strongly consider the dramatically greater benefits of 300 series over 400 series stainless steel fasteners. The richer chemical composition and required blade (SX) or welded drill point make 300 series stainless steel fasteners more costly, but the corrosion resistance benefits are far superior.