Precision Points

Compatibility 03

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Material Compatibility

As we discussed before, not all fasteners that are zinc coated are for exterior use…Whenever we are installing fasteners that will be exposed to the exterior,

<u>we should be asking the question and verifying the fastener</u>.

This includes bolts, screws, expansion type anchors, epoxy type anchors, etc.

Fasteners rated for exterior exposure will be "<u>*CORROSION RESISTANT*</u>". The fastener should have a salt spray test of over 500 hours per ASTM B117 or have less than 15% surface rust after 15 cycles of salt exposure via the <u>Kesternich</u> Test per FM Global.

DID NOT PASS

Coating/Plating/Material	% Surface Corrosion
→ Cadium	100% after 4 cycles
Stainless steel – Type 304	None after 30 cycles
Stainless steel – Type 316	None after 30 cycles
→ Stainless steel – Type 410	100% after 3 cycles
Stainless steel – Type 410 with Class 4 coating	5 to 10% after 30 cycles
→ Zinc with clear chromate (ASTM B 633,SC1)	100% after 3 cycles
→ Zinc with yellow dichromate treatment (ASTM B 633,SC1)	100% after 3 cycles
→ Mechanically galvanized, no chromate treatment (ASTM B 695)	100% after 3 cycles

Chart by Powers Fasteners

Electroplated zinc is typically not

Hot dipped galvanized, 300 series Stainless Steel, Ceramic Coated *are some examples*

Please ask your Contractor to verify the corrosion resistance of the fastener with the Mfr technical department (NOT a salesman) and request the *ICC-ES* report for verification, <u>review section #5</u>.

"Corrosion Resistant" and "For Exterior Use"

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