

TECHNICAL BULLETIN

»» PIPE HANGERS & BRACKETS

SUBJECT: Galvanic Corrosion

DATE: August 2017

PAGE: 1 of 1

Sioux Chief Manufacturing produces a wide variety of tube and pipe hangers, fasteners and bracketing systems for the professional plumbing contractor.

We offer hangers, brackets, bands and clamps that are produced from all of following metals:

- Galvanized steel
- Pre-galvanized steel
- Zinc post-plated steel
- Stainless steel, including common stainless steel bands
- Copper
- Copper pre-plated steel
- Copper post-plated steel

Our products are designed to be installed indoors during rough-in phases of construction, and typically not subjected to continuous environmental exposure.

We are often asked about whether or not galvanic corrosion, sometimes called electrolysis occurs when one of our metal products is fastened directly to a copper tube or a galvanized metal stud.

In order for galvanic corrosion to occur, the point of contact between the two metals must be connected with an an electrolyte, in frequent or continuous contact. When an electrolyte is not present, galvanic corrosion does not occur.

- Salt water and acids, are good examples of electrolytes.
- Water is an electrolyte, however, usually a fairly weak one. Normally, because of the differences in the metals compositions (copper and steel), the electrolysis affects the least noble material(s).
- Normal condensation is considered a poor electrolyte and should not give cause for concern.

Sioux Chief's hangers, fasteners and bracketing products are secured to the outside of the copper tube and never make contact with the fluids inside the tube.

Where soldering is concerned, it is uncommon to have any galvanic corrosion occur where the tube is soldered to a bracket. Good solder beads between copper tube and copper plated brackets further act to seal the contact area between the tube and the bracket.

Any clamps, hangers, fasteners or bracketing systems attached directly to copper tube or galvanized metal studs are acceptable.

The information contained herein is believed to be reliable, but no representations, guarantees, or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be attained therefrom. Before using, the user shall determine suitability of the information for the user's intended use and shall assume all risk and liability in connection therewith. Installation shall comply with local codes where applicable. **To The Extent Permitted By Law, Sioux Chief Disclaims All Warranties, Express Or Implied, Including But Not Limited To Any Implied Warranties Of Merchantability or of Fitness For A Particular Purpose.**