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Ref: Zinc Whisker

Metallic whiskers have been a topic of discussion for the past forty years ever since Western electric employees first documented the issue in central office facilities in the 1950's. Since that time, a substantial amount of research has been conducted on *tin* plated products, observing the high potential for growth of *tin* whiskers and the manufacturing practices required to mitigate those risks. The concerns are that the zinc coating may act in the same manner as tin. The idea is that the zinc coating surface changes over time and in some instances tiny "whiskers" form microscopically, detach when the product is physically touched and become airborne. Once airborne they could land onto to a circuit board and short out component without leaving trace. Very little actual research and testing has been undertaken to fully understand current manufacturing practices and what, if any, actual risk exists. The general consensus has been to extend the tin plated research to the zinc plating process even though no direct tests of the zinc plating have been conducted.

Although the topic of zinc whiskers is often discussed, with such little research and data available, general rules have been adopted by some members of industry. Some members of the data center industry have taken a very generalized stance against all zinc plating because of the mere idea of zinc whiskers. Other members of the data center industry do not see enough evidence to require a ban of zinc plating. Some industry members have suggested the use of "pre-galvanized" materials in Data centers. While at first the use of pre-galvanized materials in data center environments may appear attractive, reasons for lack of concern are unfounded. Close review of "pre-galvanized" products shows that the bending processes used to form products cause very tiny bits of the galvanizing to crack and flake off creating the small, if not larger problem.

It is interesting to see that industry members with a great deal at stake; server (Dell, HP), switch (Cisco, HP) and other electronic equipment manufacturers, continue to use and promote the use of zinc plated chassis, hardware, mounting slides and other components directly inside and outside of the very electronic items that zinc whiskers are supposed to be able to damage. Most of the equipment manufacturers see the risk of the zinc whisker to be very small and continue to use zinc plating in their own electronic equipment and fully warranty the installation.

Cablofil has provided miles of zinc plated wire mesh cable tray to the communication industry since the 1970's with no recorded incidents of zinc whiskers. We are comfortable in recommending Cablofil zinc plated wire mesh cable tray for your project without hesitation. If you still have concerns, consider our suggestion of using a painted product with a tin plated bonding strip to simplify grounding and bonding.

We hope that this information provides some background and detail concerning Cablofil wire mesh cable tray. Please feel free to contact us directly if you have any further questions or concerns.

Sincerely,

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