

# KRUGE

**EZ COATING  
ZINC WHISKERS  
STOPPER FORMULA**

**EZ**



Cable tray for the  
most efficient and  
resistant for  
data centers



**EASYCONNECT<sup>®</sup>**

**BASKET TRAY**

**EZ COATING ZINC WHISKER STOPPER FORMULA**

**EZ**

**EASYCONNECT<sup>®</sup> cable tray the most efficient and resistant for DATA CENTRES.**

**KRUGE** 

Acidic Electrolyte process  
Thickness of Zinc Layer + 12µm  
Passivation on trivalent chromium salts (Cr<sup>3+</sup>)



## ZINC WHISKER FREE BASKET TRAY FOR DATA CENTRES

The special characteristics of our **high quality acidic EZ coating** neutralizes the growth of whisker minimizing the risks associated



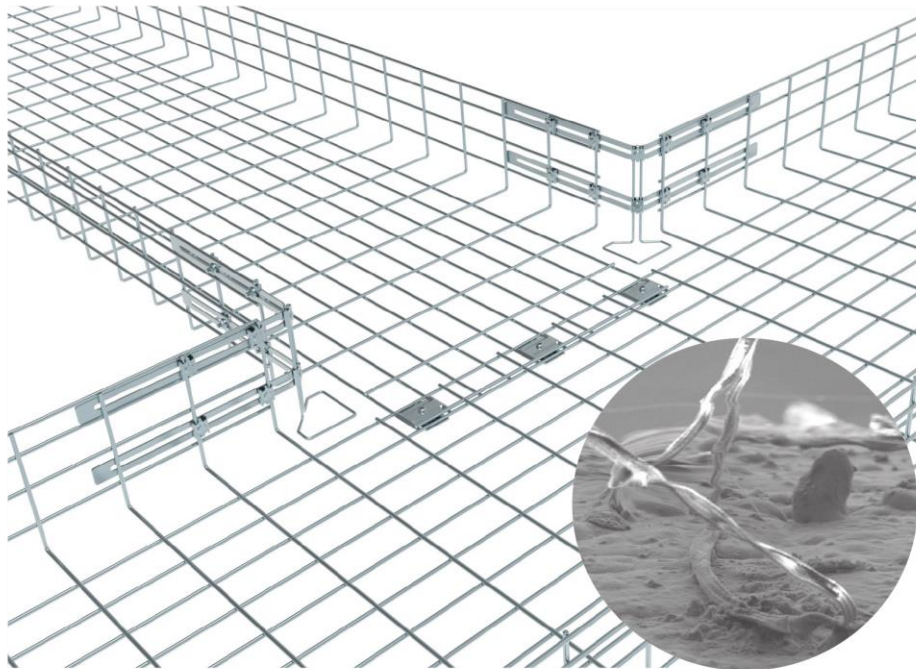
The outcome of a 4 year research project carried out with a research group in the Area of Materials Science and Metallurgical Engineering, analyzing the zinc whisker phenomenon has allowed us to determine the most effective electrolytic formula to prevent the growth of zinc whiskers on our EASYCONNECT® basket cable trays

**EASYCONNECT® is the most efficient and resistant basket tray for DATA CENTRES.**



Acidic Electrolyte process  
Thickness of Zinc Layer + 12µm  
Passivation on trivalent chromium salts (Cr<sup>3+</sup>)





VALDINOX has led the most complete scientific analysis together with a research group in the Area of Materials Science and Metallurgical Engineering at the University of Cantabria, LADICIM

The research project considered all relevant parameters related to the zinc whisker phenomena and 9 different electrolytic zinc and hot dip galvanized coatings were observed though electronic microscope during at least 12 months following the evolution of zinc whiskers.

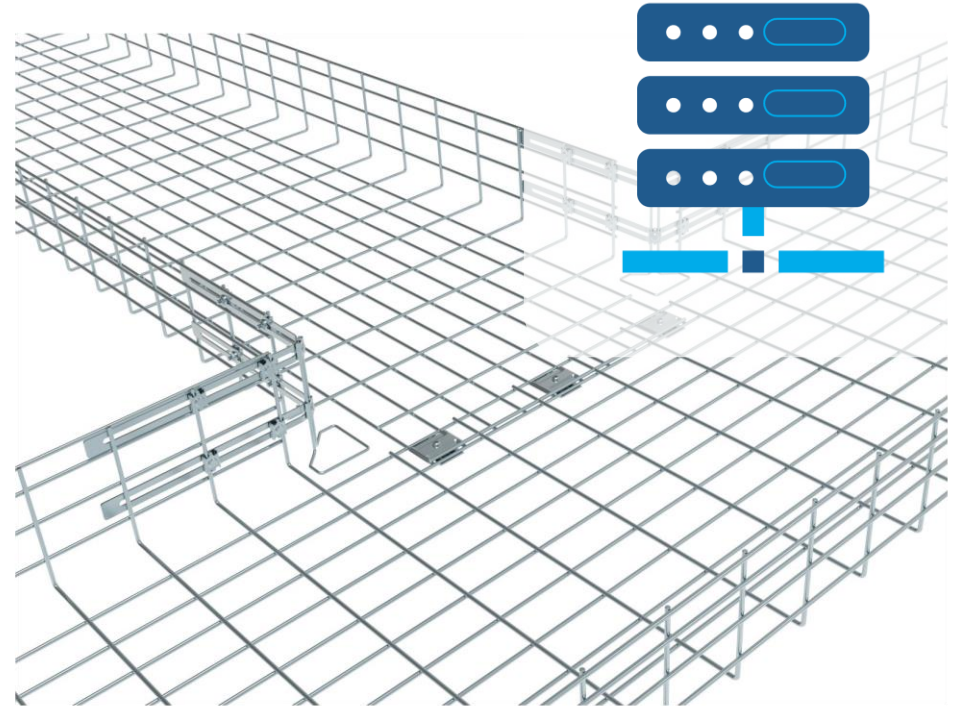
1. Electrolytic zinc coating (Alkaline) + passivation
2. Electrolytic zinc coating (Acidic) + passivation
3. Electrolytic zinc coating + sealant (black)
4. Electrolytic zinc coating + passivation (black)
5. Electrolytic zinc coating + powder coating
6. Zinc spray + powder coating
7. Electrolytic Zinc-Aluminum Alloy
8. Pregalvanized
9. Hot Dip Galvanized



## ZINC COATING FOR DATA CENTRES

Our deep knowledge about the zinc whisker phenomenon has allowed us to set a formula for EZ coatings to reduce minimize the risk of zinc whiskers

1. **Thicker zinc layers (+10µm)** reduce residual and compression stress thus slowing growth rate of whiskers.
2. **Passivation with trivalent chromium** salts ( $\text{Cr}^{3+}$ ) as Cr inhibits the onset of whiskers.
3. **Acidic electrolytic process** provide longer incubation periods and reduce density of hillocks and whiskers.



**KRUGE** 



**VALDINOX EZ coating formula is the most efficient and reliable method to avoid all risks associated to whiskers**