

HEP<sup>2</sup>R

Plating solution for industrial and traffic environments

## An innovative plating solution for outdoor RF coaxial connectors designed to withstand corrosive environments for decades.



Initial State



After NSS 720Hrs



After ISO 21207 5 Cycles

Today, telecommunication operators are installing more equipment in high humidity, hot temperature conditions which ultimately subjects the products to corrosive gases from industrial or traffic environments.

To meet the needs of these harsh environments a new solution is required. This solution should enable products to withstand neutral salt spray for 720 hours and ISO 21207 – a test procedure simulating severe industrial or traffic environment.

In the past, BBR or white bronze plating was typically used but has proven to result in unsatisfactory corrosion resistance levels. To improve the performance of products, post-treatment was applied on BBR or silver+BBR plated products. Although this showed some improvement, post-treatment is not considered a long term, reliable solution and can provide additional risks over the product life cycle.

### ISO 21207 Method B

Corresponding test duration vs Years in specified environment

Weeks	Life Cycle Years
1 Week	3 Years
2 Weeks	8 Years
3 Weeks	14 Years
5 Weeks	27 Years

Source: International Standard ISO 21207 :2004



**HEP<sup>2</sup>R provides similar galvanic cells to bronze alloy surface treatment, which makes this plating solution ideal for commonly used materials and alloy in coaxial connectors.**

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Since 1977, Radiall has been dedicated to developing plating solutions for industrial applications. Over the years, Radiall has studied several plating alloys to meet the stringent requirements harsh environments produce.

HEP<sup>2</sup>R (Harsh Environment Protective Plating by Radiall) is a new plating solution that meets ASTM B 117 & ISO 21207 Method B 5 cycle testing.

Due to its unique benefits, HEP<sup>2</sup>R has received attention from the telecom industry and is the preferred plating solution to protect outdoor connectors in high corrosion environments for a long period. HEP<sup>2</sup>R is cost effective plating solution suitable for outdoor connectors where maintaining the products appearance is critical.

To determine product performance and durability, products undergo ISO 21207 testing which simulates 27 years of exposure in severe traffic environment or industrial environment with salt spray contamination. Radiall's HEP<sup>2</sup>R has successfully passed ISO 21207 testing and showed no corrosion and very little change in appearance.

## Applications

Based on its environmental performance, HEP<sup>2</sup>R plating is mainly dedicated for Telecom applications with a focus on 4.3-10 and 7/16 connectors. For use on other products exposed to salt spray contamination or corrosive gases, please consult us.

## Features & Benefits

- Very low intermodulation (-135 dBm on 4.3-10 connector)
- No change on VSWR compared to similar product plated with BBR
- High corrosion resistance (ASTM B 117 / TELCORDIA GR-487-CORE / ISO 21207 Method B 5 Cycles)
- Similar galvanic cell level compared to BBR plating
- High hardness
- Anti-seize properties
- Not subject to whiskers
- Non magnetic plating
- Good solderability
- Hypoallergenic plating
- RoHs and REACH compliant
- Cyanides free