

ELPANG Upgrade 100

Boosts corrosion resistance of 1 μ m electro-galvanizing without a sealer.
White rust 15 hr / red rust 96 hr—without sacrificing cost competitiveness.

Cut white-rust claims—no new equipment.
Keep 1 μ m thickness; improve shipped appearance.

Post-Shipment Risk

Low-cost 1 μ m electro-galvanizing can develop premature white rust during transport or storage. Discoloration before delivery or use can cause quality claims and rework.

Maintain thin-film cost advantages while reducing corrosion risk in distribution.

Why ELPANG Upgrade 100

Non-sealed plating has clear limitations

Low-cost electro-galvanizing without a sealer reduces cost but has limited corrosion resistance, including premature white rust. ELPANG System forms an inorganic barrier that inhibits corrosive ingress and upgrades conventional plated products to higher-corrosion-resistance performance. **It retains the existing plating color and line while improving corrosion resistance by more than three times versus conventional plating.**

ELPANG Upgrade 100 Performance Comparison

Category	Electro-galvanizing without sealer	ELPANG Upgrade 100
Coating Thickness	Approx. 1 μ m	Approx. 1 μ m
White Rust (SST)	5 hr	15 hr
Red Rust (SST)	24 hr	96 hr
Key Risk	Premature white rust in transit/storage	Reduced premature white-rust risk
Target Application	Low-cost thin-film plating	Quality upgrade for thin-film plating

Expected Benefits

01

Maintain Existing Thickness

Improve corrosion resistance while retaining the approximately 1 μ m thin-film specification.

02

Minimize Cost Impact

Retain the production efficiency and cost competitiveness of economical plating.

03

Prevent Premature White Rust

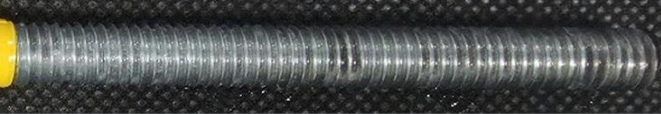
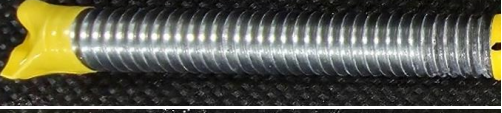
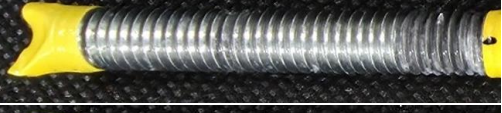
Reduce premature white rust and rework risk during transport and storage.

04

Improve Delivery Reliability

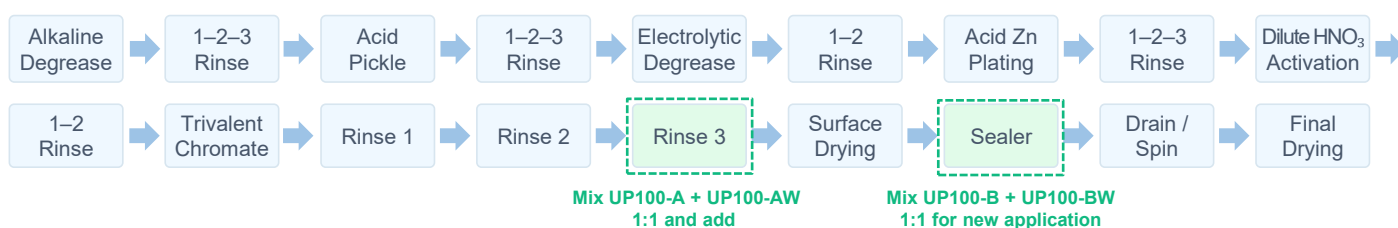
Improve pre-use appearance stability and reduce exposure to quality claims.

Corrosion Resistance Comparison

Condition	◀ Left: Upgrade 100 (1 μm)	Electro-galvanizing without sealer (1 μm) ▶
Before SST		
SST 5 hr		
SST 10 hr		
SST 24 hr		
SST 48 hr		
SST 72 hr		
SST 96 hr		

※ The performance data specified herein is achieved only when the zinc plating and trivalent passivation processes are properly controlled. Therefore, please conduct preliminary testing before application.

ELPANG Upgrade 100 Solutions and Application Process



- **Pre-sealer (water-based inorganic structural reinforcement):** Mix UP100-A concentrate and UP100-AW diluent 1:1, then dilute 1 part mixture with 100 parts water and add to the third chromate rinse tank.
- **Main sealer (reactive water-based inorganic):** Mix UP100-B concentrate and UP100-BW diluent 1:1, then dilute with water. Rack = 1 part mixture : 15 parts water / Barrel = 1 part mixture : 10–15 parts water

ELPANG Operating System Program

We supply dedicated ELPANG solutions and an operating management system to sustain each customer's target performance.

Process Control

Current density and bath control

Quality Control

SST and quality issue control

Data Support

Production stability and optimization

※ Provided as a subscription service with monthly online training. Please contact us for pricing.

Upgrade corrosion resistance and differentiate your products with ELPANG Upgrade 100.

For higher corrosion resistance, please contact KEMP regarding ELPANG Upgrade 300 (SST 300 hr) and Upgrade 500 (SST 500 hr).



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