

ZINC SHIELD®

PACIFIC GOLD®

## Zincshield Powdercoating Primer



Where steel is to be coated, Zincshield Powdercoating primer is the place to start.

Zincshield is a high Zinc containing primer specifically formulated and designed for powder coating applications. Zincshield may be used with confidence on steel substrates wherever excellent corrosion protection or inhibition is required.

A unique "Green Cure" feature of Zincshield technology allows your powder coater to apply the Zincshield primer, partially cure, then immediately apply the desired finish coat. The two coat system is co-baked to full cure thus ensuring maximum polymer interaction and excellent intercoat adhesion.

Unlike some other anti-corrosion processes where product has to be moved from site to site before it is finished, significant benefits and cost savings flow from using one applicator to complete the entire coating process on one site.

- Reduced transport costs
- Shorter lead times for completion
- One site Quality Management of the Total Coating System
- Elimination of the need for exposure to the weather of unfinished items during transport or storage

The technology inherent in Zincshield and the powder coating application process also delivers other significant benefits which include;

- A processing cure temperature of 200°C (metal temperature) which is unlikely to affect steels which have been tempered or heat treated
- A smooth finish with no dross, dags or sharp edges
- No pin holes or blow holes as potential sites of corrosion
- A robust nonporous coating system
- No further preparation (sanding, degreasing, degassing etc) required pre finish coating
- No dipping involved, no drain holes necessary, more flexibility with product design
- Size and shapes of products to be coated are now only limited by the size of the powder coating cure oven. This allows for full fabrication, welding, and assembly etc, to occur prior to priming and finishing coating. The need for post fabrication processes and touch ups is eliminated
- Excellent penetration of recesses
- Economical coating and application process means lower total applied finished costs

Steel with various forms of preparation & a coat of Zincshield



ZINC SHIELD®



# ZINCSHIELD®

## Zincshield - protects steel from corrosion whilst providing a sound substrate for powder coating.

**Pacificgold Zincshield** is designed to provide a coating system that inhibits corrosion by an anodic process whilst displaying excellent inter-coat adhesion properties. Not only does Zincshield exhibit these desired characteristics, but the economies of application possible, render a powdercoating system based on Zincshield a most competitive solution.

Zincshield is formulated to function as a primer / undercoat for powdercoatings such as PG288, Alphatec plus or other finish powdercoatings.

### Performance Guide

<b>Weather</b>	Zincshield contains an epoxy component which will chalk on exterior exposure. Zincshield accordingly is not recommended for exterior use without a top coat.
<b>Salt Spray</b>	Shot blasted mild steel to Class 2.5 (2000 hours – pass @ ASTM B117)
<b>Heat</b>	Excellent resistance to 120°C continuous service conditions. Intermittent service at 140°C is possible.
<b>Humidity</b>	Excellent resistance to 35°C/100% humidity for 1000 hours on zinc phosphated steel and chromated aluminium.
<b>Acid</b>	Resistant to spills of dilute acids 400hrs 10% Hydrochloric Acid - No effect
<b>Abrasion</b>	Excellent resistance to abrasion
<b>Alkali</b>	Resistant to spills of dilute alkali 10% sodium hydroxide - blistering loss of gloss
<b>Pencil Hardness</b>	Min 3H
<b>Flexibility</b>	Pass 80 inch/lb
<b>Cross Hatch Adhesion</b>	No removal
<b>Re-coatability</b>	Formulated for "Green Cure". Finish coat application

### Recommended Coating System

To maximise the corrosion inhibition potential of Zincshield and fully utilise the synergistic benefits achievable with the product, Orica Powder Coatings recommend the following coating system and procedure:-

- For optimal performance, surfaces should be degreased and free from any oxides, mill scale, greases and lubricants
- Where appropriate, substrates should be grit blasted with angular grit to SA 2.5 finish
- To avoid flash rusting ferrous metal to be coated should be pre-treated immediately after grit blasting with a Zinc or Iron Phosphate (refer BS6497 and/or AS/NZ4506)
- Apply one coat of Zincshield @ an average film build of 80 microns and partially cure for 3 minutes @ 200°C metal temperature
- Immediately after the partial cure of the Zincshield, apply an exterior durable top coat such as Dupol at the recommended film build and cure as normal i.e. 180°C for 10 minutes

#### N.B

Corrosion protection systems (Galvanising, Zinc spray, epoxy barrier coats etc) are reliant upon a continuous film to protect the substrate. Breaks in the film caused by cutting, drilling or mechanical damage must be repaired, please consult your Orica representative for recommended repair systems.

Following this recommended coating system and procedure will ensure that Zincshield's substrate protection potential is maximised and excellent intercoat adhesion between Zincshield and the top coat is achieved.

**Specify as:** Pacificgold Zincshield

### 2000 hours salt spray



**Left Panel:** 2 pack liquid epoxy primer with top coat.

**Right Panel:** Zincshield with top coat.



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