Epozinc ZL Advanced Zinc-Rich Primer

**Product Description**
An epoxy-based powder coating primer, rich in zinc which forms a network within the powder coating substrate, designed to give excellent corrosion protection over steel substrates.

It forms the base layer of a two-coat system and must be coated with a second coat, usually a polyester coating, for exterior use. However, epoxy or epoxy-polyester systems could be used for interior use.

Owing to the product's inherent corrosion protection, it is recommended for use as part of a system to protect steel in corrosive environments such as coastal areas, industrial parks or swimming pools.

**Key Benefits**
- Excellent corrosion resistance
- Excellent chemical resistance
- Excellent surface wetting
- Excellent adhesion
- Excellent overcoatability and intercoat adhesion without sanding
- Good corner-covering (edge coverage)

**Powder Properties**
- **Chemistry**: A thermosetting epoxy resin system containing >50% w/w zinc.
- **Application**: Corona electrostatic spray.
- **Coating Thickness (DFT)**: General recommendation is 60-100 microns (μm), with a minimum thickness of 60 μm.
- **Gloss (ISO 2813)**: 60% ± 5 on a 60 degree head
- **Specific Gravity**: 2.60 ± 0.1 g/cm³
- **Coverage**: Approximately 6.5 m²/kg at 60 microns film thickness.
- **Storage & Shelf Life**: When stored in a cool (<20°C), dry environment: 12 months.

**Pretreatment**
To ensure maximum adhesion the substrate must be thoroughly clean, free from grease, oil, rust, mill scale or any other contaminant. Recommended surface preparation is by solvent or chemical degreasing, followed by grit blasting (recommended blast profile: R₃ 35-65μm, R₄ 6-10μm, minimum cleanliness: SA2.5); however the substrate may instead be chemically cleaned and treated (typically a zinc phosphate system) prior to powder coating. If using a chemical treatment, discuss the performance requirements with the treatment chemical supplier.

**Mechanical Tests**
Unless otherwise specified, all tests were carried out under laboratory conditions on 0.8mm degreased and zinc phosphated steel panels. A powder coating DFT of 60-70 microns was used, followed by a second coat of RAL 9010 827 Architectural Polyester to 60-70 microns.

- **Hardness (Epozinc)**: ISO 2815 Buchholtz Indentation >80
- **Flexibility (Epozinc)**: ISO 1519 Cylindrical Mandrel Pass >5mm
- **Adhesion**: ISO 2409 2mm Crosshatch Pass G10
- **Cupping (Epozinc)**: ISO 1520 Erichsen Pass >5mm
- **Impact (Epozinc)**: BS 3900: Part E7 >25kg cm (N)
- **Intercoat Adhesion**: Hoffman Scratch Test >1500g
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Corrosion and Durability

<table>
<thead>
<tr>
<th>Test</th>
<th>Description</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral Salt Fog</td>
<td>ASTM B117 (1000 hours)</td>
<td>Corrosion creep &lt;2mm from scratch</td>
</tr>
<tr>
<td></td>
<td>a) Steel, iron phosphate with final rinse</td>
<td>Adhesion – GT0</td>
</tr>
<tr>
<td></td>
<td>b) Steel, zinc phosphate</td>
<td>Corrosion creep &lt;2mm from scratch</td>
</tr>
<tr>
<td></td>
<td>c) Steel, shot-blasted to SA 2.5</td>
<td>Adhesion – GT0</td>
</tr>
<tr>
<td>Boiling Water</td>
<td>2 hours boiling water</td>
<td>No defects or detachments</td>
</tr>
<tr>
<td>Humidity</td>
<td>BS 3900 Part F2</td>
<td>More than 1000 hours without effect</td>
</tr>
</tbody>
</table>

Colour Availability

A dark grey colour.

Recommendations for Use

Select a pre-treatment regime appropriate to the substrate and the desired performance. Where a chemical pre-treatment such as a phosphate system is used, seek advice from the pre-treatment chemical supplier. Care should be taken not to contaminate the surface before applying a second coat; over-curing the primer or handling the surface without gloves can compromise the intercoat adhesion.

- Apply Epozinc ZL to a dry coating build of at least 60 microns, ensuring all corners and recesses are covered.
- **Partially** cure the primer. Typically, the primer needs to be just past its gelling stage.
- Apply and cure the top coat as soon as possible after applying primer. Discuss application parameters with the spray equipment supplier; generally reducing kV and μA to as low as possible will help penetration to difficult recesses. Handle only with gloves over-coating. The second coat may be applied whilst the primer is still warm.

Should over-curing have occurred or where handling has been unavoidable, the primer may need to be slightly abraded.

Restriction of Hazardous Substances (RoHS/RoHS2)

This product conforms to the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations (RoHS and RoHS2) Directive. It does not contain any compounds of lead, mercury, cadmium or hexavalent chromium; nor does it contain polybrominated biphenyls (PBBs) or polybrominated diphenyl ether (PBDE).

Health & Safety

This product is intended for use only by professional applicators in industrial environments. Consult the relevant health and safety data sheet indicated in the box label before use.