

## Thermaprime PZP 130 Zinc Phosphate Powder Coating Primer

### Product Description:

**Thermaprime PZP 130** is an epoxy powder coating primer containing zinc phosphate designed for improved corrosion protection of mild steel. **Thermaprime PZP 130** is recommended for use as an anti-corrosive primer where good quality chemical conversion pre-treatment is recommended or specified but may not be available. It is intended to be over-coated with a suitable product from our range of coatings, depending on the end-use application.

We recommend that the primer should be partially cured prior to application of the topcoat. When the topcoat is cured for a minimum of ten minutes at 180 degrees C metal temperature (longer if specified for the topcoat) the primer will also fully cure. The substrate must be in a clean, rust-free condition prior to application of the primer. Film thickness of the primer coat should be controlled to assist application of the second coat: trials are recommended to optimise application conditions.

### Colours Available:

Dark grey (Code TLE-6226-M) is available as standard. Other colours can be manufactured to order.

### Substrate Preparation:

Thermaset Ltd's **Thermaprime PZP 130** adheres to most metals and does not require other primers. Articles to be coated must be free from rust, grease, oil and mill scale. Solvent vapour degreasing is usually adequate. Grit blasting to minimum SA 2.5, Rz 35-65µm, Ra 6-10 µm and phosphate or chromate conversion coatings may be used if even greater corrosion protection is specified. If using chemical pretreatments, follow advice from the pretreatment chemical supplier.

Care should be taken not to contaminate primer surface before over-coating. Should oil contamination by handling without gloves or over-curing of primer have occurred, the primer may need degreasing with a mild detergent and/or slight abrasion with 800 sandpaper. Remove dust by blowing with clean dry air.

### Application:

**Thermaprime PZP 130** should be applied by corona electrostatic spray equipment, with an even dry film thickness of 55-65 µm. Tests should be carried out to ensure suitability prior to full-scale application. Please note we strongly advise against the use of pre-treatment over the zinc primer between coats. Subsequent topcoats may require modified application conditions, e.g. lower voltage.

### Powder Properties:

Chemical type	Thermosetting epoxy resin system.
60° Gloss (EN ISO 2813)	Approximately 5%
Specific Gravity	1.5 g/cm <sup>3</sup>
Particle size	Suitable for electrostatic spray
Stoving schedule	Partial cure 5 minutes @ 180°C metal temperature Full cure 10 minutes @ 180°C metal temperature or longer to suit topcoat
Storage and shelf life	12 months when stored in cool (below 25°C) dry conditions. Open boxes must be resealed.

## POWDER COATING

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### Test Conditions:

Unless otherwise specified, all tests have been carried out under laboratory conditions on 0.8mm degreased and zinc phosphated steel panels. A **Thermaprime PZP 130** dry film thickness of 60-70 microns was used, followed by a topcoat of RAL 9010 architectural polyester of 60-70 microns. Actual product performance will depend on the circumstances under which the product is used.

### Mechanical Tests:

Flexibility (cylindrical mandrel)	ISO 1519	Pass minimum 5mm
Buchholz Hardness	ISO 2815	Pass minimum 80
Impact	ISO 6272-2	Pass minimum 25 N
Erichsen cupping	ISO 1520	Pass minimum 5mm
Adhesion (2mm cross hatch)	ISO 2409	Pass Gt 0

### Corrosion Tests:

Constant Humidity	ISO 6270	Pass 1000 hours.
Boiling water	2 hours	No defects or detachments.
Neutral Salt Spray	ASTM B117	Pass 1000 hours. Adhesion Gt0 Corrosion creep < 2mm from scribe

### Health and Safety Precautions:

This product is intended for use only by professional applicators in industrial environments. Consult the relevant Material Safety Data Sheet available from Thermaset Limited before use.

### Restrictions of Hazardous Substances (RoHS2):

Thermaset Limited **Thermaprime PZP 130** Powder Coatings are suitable for use on items covered by Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (Directive 11/65/EU, ROHS 2). This product contains none (or less than the maximum allowed amount) of the following restricted chemicals:-

Lead, Mercury, Cadmium, Hexavalent Chromium or their compounds. Poly-brominated biphenyl (PBB) or Poly-brominated diphenyl ether (PDBE) flame retardants. Bis(2-ethylhexyl) phthalate (DEHP), Benzyl butyl phthalate (BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP)

Our data sheets and sales literature are issued for the purpose of supplying product information. The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. Always read the Material Safety Data Sheet and the Technical Data Sheet for the product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advices given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous improvement. It is the user's responsibility to verify that this data sheet is current prior to using the product.