

POWDER COATING

Thermaprime EEP 140 Extreme Edge Anticorrosive Primer Powder Coating

Product Description:

Thermaprime EEP 140 is a zinc-free epoxy-polyester powder coating primer designed for improved corrosion protection of mild steel. **Thermaprime EEP 140** contains advanced anticorrosive pigments which have a passivating effect on the steel substrate. The modified viscosity profile of **Thermaprime EEP 140** produces improved edge coverage and hence improved edge anti-corrosion protection compared to other primers in the Thermaprime range.

Colours Available:

Light grey is available as standard. Other colours can be manufactured to order.

Substrate Preparation:

For maximum adhesion the substrate must be thoroughly cleaned of grease, rust etc. Recommended substrate preparation is by solvent or chemical degreasing followed by grit blasting to minimum SA 2.5, Rz 35-65µm, Ra 6-10 µm and/or degreasing and zinc phosphating. If using chemical pretreatments, follow advice from the pretreatment chemical supplier.

Application:

Thermaprime EEP 140 can be applied by manual or automatic spray equipment, with a dry film thickness of 60-100 µm for best performance. Minimum of 60 µm is recommended to achieve good protection.

Powder Properties:

Chemical type	Thermosetting epoxy-polyester hybrid resin system.
60° Gloss (EN ISO 2813)	Approximately 40%
Specific Gravity	1.6 g/cm ³
Particle size	Suitable for electrostatic spray
Stoving schedule	Green cure 10 minutes @ 130°C parts temperature Full cure minimum 10 minutes @ 180°C parts temperature or to suit topcoat. Curing temperatures above 200°C are to be avoided.
Storage and shelf life	12 months when stored in cool (below 25°C) dry conditions. Open boxes must be resealed.

Topcoat Application

Thermaprime EEP 140 may be green cured or fully cured but must not be over-baked. Curing temperatures above 200 °C are to be avoided. Apply and fully cure the topcoat as soon as possible after applying primer- this can be whilst the primer is still warm. Primer must be fully cured if a wet paint topcoat is to be used. Alternatively fully cured **Thermaprime EEP 140** may be used as a holding primer for up to six weeks before over-coating. If used as holding primer the surface must be cleaned before over-coating as detailed for contaminated surfaces below.

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.

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The following data are based on tests performed under laboratory conditions. Actual performance may vary depending on the application conditions.

Mechanical Tests:

Curing conditions	10 minutes @ 180°C metal temperature	
Primer film thickness	60 to 70 microns	
Substrate	0.8mm degreased cold-rolled steel.	
Impact (direct)	ISO 6272-2	Pass minimum 40 Kg.cm
Impact (reverse)	ISO 6272-2	Pass minimum 40 Kg.cm
Adhesion	ISO 2409	Gt 0

Anti-Corrosion Tests:

Substrate 0.8mm iron phosphated steel panels. **Thermaprime EEP 140** dry film thickness of 60-80 microns followed by a topcoat of RAL 9010 architectural polyester gloss of 60-80 microns. Actual product performance will depend on the circumstances under which the product is used.

Neutral Salt Spray	ASTM B117	Pass 2000 hours. Creep from scribe < 2mm Adhesion Gt0
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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 EEP 140** 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 (PBDE) flame retardants. Bis(2-ethylhexyl) phthalate (DEHP), Benzyl butyl phthalate (BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP)

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