



# PR10 OUTDOOR DURABLE MATT POLYESTER POWDER COATING

TECHNICAL DATA SHEET

## INTRODUCTION

**OXYPLAST** PR10 is a matt thermosetting powder coating based on saturated polyester resins specially selected for exterior use. It's very good flow-out and excellent resistance to atmospheric ageing and ultra-violet light make it highly decorative and durable in outdoor environments. This high performance has been proven through many years of service in various applications.

## GLOSS AND COLOUR RANGE

Gloss levels: 5 - 25% at 60°. A full colour range is available.

## APPLICATIONS

Include architectural hardware, outdoor furniture, air conditioners, signboards, bicycle frames, garage doors, etc.

## APPLICATION SCHEDULE

May be applied by electrostatic spraying using classic devices which can provide a negative tension of 60 - 80kV.

The powder is cured in a suitable convection or infra-red oven.

Curing:

Medium cure 10 mins at 200°C

Optimal film thickness: 60 - 80µm.

## SUBSTRATES AND PRE-TREATMENT

May be applied to the following substrates after the appropriate cleaning and conversion coating:

Ferrous metals (cold-rolled steel, cast iron, etc.)	:	Iron or zinc phosphatation
Zinc surfaces (galvanised steel, zinc alloy)	:	Chromatation or zinc phosphatation
Aluminium alloys	:	Chromatation

## STORAGE

At temperatures not exceeding 25°C and under dry conditions, PR10 powders may be stored for up to 6 months without affecting their free-flowing properties. The coating thus obtained will still have optimal characteristics.

## PROPERTIES OF THE POWDER

Melting range (Kofler)	:	85 - 105°C
Specific gravity (DIN 55990/3)	:	1.25 - 1.75 (depending on colour)
Particle size distribution, % above 100µm	:	0%
% above 32 µm	:	50 - 60%

Proudly Distributed by:



www.oxytech.com.au

Manufactured by:

**Lea Hin Co. (Powder Manufacturers) Pte Ltd, SINGAPORE**

The Chosen Finish

**PROPERTIES OF THE COATING**

<b>Physical and Mechanical</b>	<p>The following are properties typical of PR10 determined on 0.8mm gauge degalvanised steel:</p> <p>Film Thickness : 60 - 80µm                  Gloss (ASTM D523,60°) : 5 - 25%                  Flow-out : Very good                  Adhesion (din 53151 - 2mm spacing) : GT = 0                  Pencil hardness (ASTM D3363-Staedtler Lumograph) : 2H - 3H                  Buchholz hardness (DIN 53153) : 100 - 125                  Sclerometre hardness : 500 - 7050gms                  Conical mandrel (ASTM D522) : &lt; 8mm                  Direct impact (ASTM D2794 - 0.625 in. Diameter ball) : &gt; 20kg.cm                  Reverse impact (ASTM D2794 - 0.625 in. Diameter ball) : &gt; 5kg.cm                  Erichsen cupping (DIN 53156) : &gt; 2mm                  Heat resistance, 30 mins at 200°C : Good</p>
<b>Resistance to Common Synthetic Detergents</b>	<p>72 hours immersion in 3% solution : No blistering or loss of adhesion                  : No significant change in appearance</p>
<b>Salt-Spray Resistance</b>	<p>According to ASTM B117-73 on,                  Chromated aluminium, 2000 hours : No blistering or loss of adhesion                  Zinc phosphated steel, 250 hours : 1mm undercutting                  Iron phosphated steel, 250 hours : 10mm undercutting</p>
<b>Humidity Resistance</b>	<p>According to ASTM D2247 on                  chromated aluminium, 1000 hours : No blistering or loss of adhesion</p>
<b>Chemical Resistance</b>	<p>PR10 has been checked for resistance to various chemicals (48 hours contact with the coating at ambient temperature).                  Nitric acid 20%, Sulphuric acid 50%, Sodium hydroxide 20%, Ammonium hydroxide 35%, Chromic acid 20%, Acetic acid 10%, Citric acid 5%, Hydrogen peroxide 40 vol., Hydrogen sulphide saturated, Ethanol, n-Butanol : Film undamaged                  Petroleum ether : Film slightly softened                  Methyl Ethyl Ketone : Film damaged</p>
<b>Accelerated Weathering</b>	<p>According to DIN 53231                  1000 hours Suntest : Total colour change (washed)                  (150 kilolux, 40°C, Delta E = 0.8 - 3.0 depending on colour                  UV limit 320 nm, Excellent gloss retention                  Water immersion every 20') Negligible chalking</p>
<b>Natural Weathering - Florida Exposure</b>	<p>24 months exposure : Excellent gloss retention                  Negligible chalking</p>

In accordance with **OXYPLAST** policy of product development, this specification is subject to change without notice.

Proudly Distributed by:

Manufactured by:

**Lea Hin Co. (Powder Manufacturers) Pte Ltd, SINGAPORE**

