



FF160 GLOSSY-SATIN EPOXY-POLYESTER POWDER COATING

TECHNICAL DATA SHEET

INTRODUCTION

OXYPLAST FF160 is a thermosetting powder coating based on epoxy and polyester resins. It is formulated to give a glossy or satin finish having very good flow-out, overbake yellowing resistance and mechanical properties.

The outstanding decorative and protective properties of FF160 are utilised in a wide range of indoor applications.

GLOSS AND COLOUR RANGE

Gloss levels range from satin to high gloss: 50-95% at 60°. A full colour range is available.

APPLICATIONS

Include home domestic appliances eg. Refrigerators & microwave ovens, home and office furniture, electrical trunkings, light fixtures, shelving, machinery, 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 180°C (metal temperature)

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 : Iron or zinc phosphatation
(cold-rolled steel, cast iron, etc.)

Zinc surfaces : Chromatation or zinc phosphatation
(galvanised steel, zinc alloy)

Aluminium alloys : Chromatation

STORAGE

At temperatures not exceeding 30°C and under dry conditions, FF160 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) : 70 - 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%

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PROPERTIES OF THE COATING

Physical and Mechanical	<p>The following are properties typical of FF160 determined on 0.8mm gauge degreased galvanised steel:</p> <p>Film Thickness : 60 - 80µm Gloss (ASTM D523,60°) : 50 - 95% Flow-out : Very good Adhesion (din 53151 – 2mm spacing) : GT = 0 Pencil hardness (ASTM D3363-Staedtler Lumograph) : H - 2H Buchholz hardness (DIN 53153) : 91 – 111 Sclerometre hardness : 350 – 450gms Conical mandrel (ASTM D522) : < 4mm Direct impact (ASTM D2794 – 0.625 in. Diameter ball) : > 80kg.cm Reverse impact (ASTM D2794 – 0.625 in. Diameter ball) : > 80kg.cm Erichsen cupping (DIN 53156) : > 6mm Heat resistance, 30 mins at 200°C : Good</p>
Salt-Spray Resistance	<p>According to ASTM B117-73 on,</p> <p>Chromated aluminium, 2000 hours : No blistering or loss of adhesion Zinc phosphated steel, 1000 hours : 5mm undercutting Iron phosphated steel, 500 hours : 10mm undercutting</p>
Chemical Resistance	<p>FF160 is resistant to some common inorganic acids, bases and salts, organic acids and solvents.</p>

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

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