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 (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 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 100 µm	0%
% above 32 µm	50 – 60%

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

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PROPERTIES OF THE COATING

a. Physical and Mechanical

The following are properties typical of FF160 determined on 0.8mm gauge degreased galvanised steel:

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 – Ø0.625 in. ball)	> 80kg.cm
Reverse impact (ASTM D2794 – Ø0.625in. ball)	> 80kg.cm
Erichsen cupping (DIN 53156)	> 6mm
Heat resistance, 30 mins at 200°C	Good

b. Salt-Spray Resistance

According to ASTM B117-73 on,

Chromated Aluminium, 2000 hours	No blistering or loss of adhesion
Zinc Phosphated Steel, 1000 hours	5mm undercutting
Iron Phosphated Steel, 500 hours	10mm undercutting

c. Chemical Resistance

FF160 is resistant to some common inorganic acids, bases and salts, organic acids and solvents.

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