



OXYHIN SDN. BHD. (393471-X)

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TECHNICAL DATA SHEET

OXYPLAST FF160 EPOXY-POLYESTER POWDER COATING

OXYPLAST FF160 is a thermosetting powder coating based on epoxy and polyester resins. It is formulated to provide glossy or satin finish having very good flow-out, overbake yellowing resistance and mechanical properties. Texture and wrinkle finishing is also available for OXYPLAST FF160. The outstanding decorative and protective properties of FF160 are utilised in a wide range of indoor applications.

APPLICATIONS

Include domestic appliances eg. Refrigerators & microwave ovens, home and office furniture, electrical trunkings, light fixtures, shelvings, machinery, ceiling panels, switchboards etc.

SUBSTRATES AND PRE TREATMENT

In order to obtain optimal anti corrosion properties, it is advised to apply a chemical pre-treatment prior to powder coating application.

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

APPLICATION SCHEDULE

May be applied by electrostatic spraying using classic devices, which can provide a negative tension of 60 - 80 kV. The powder is cured in a suitable convection or infra red oven.

Curing : 10 min at 180°C (metal temperature)

Optimal film thickness : 60 - 80 µm

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 (Laser Particle size analyser)	
% above 100µm	: Less than 5
% above 32µm	: 50 – 65
Average particle size, µm	: 35 – 45



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PROPERTIES OF THE COATING

a. Physical and Mechanical

The following are properties typical for FF160 determined on 0.5mm gauge degreased galvanised steel :

Film thickness (ISO 2178)	: 60 – 80 μ m
Flow out	: Depending on finishing
Gloss (ISO 2813, 60°)	: Depending on finishing
Adhesion (ISO 2409)	: GT = 0
Pencil hardness	
(ASTM D3363 - Staedtler Lumograph)	: HB – 2H
Conical mandrel (ISO 6860)	: Pass at 4mm diameter
Direct impact	
(ASTM D2794-0.625in diameter ball)	: 65kg.cm
Reverse impact	
(ASTM D2794-0.625in diameter ball)	: 65kg.cm
Heat resistance, 30mins at 180 °C	: Good

b. Salt spray Resistance

According to ASTM B117-73 on

Chromated Aluminium, 1000hrs	: No blistering or loss of adhesion
Zinc phosphated steel, 1000hrs	: 5 mm undercutting
Iron phosphated steel, 500hrs	: 10 mm undercutting

c. Chemical Resistance

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

STORAGE

At temperatures $\leq 25^{\circ}\text{C}$ dry condition and humidity $< 60\%$, FF160 powder may be stored for up to 6 months without affecting their free flowing properties. The coating thus will still have optimal characteristics.

All the information given in this Data Sheet is the results of our research work and experience. It is given in good faith and with every belief in its accuracy but cannot be considered as a formal warranty. In accordance with OXYPLAST policy of product development, this specification is subject to change without notice.