



OXYHIN SDN. BHD. (393471-X)

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TECHNICAL DATA SHEET

FF165 SATIN EPOXY - POLYESTER POWDER COATING

OXYPLAST FF165 is a thermosetting powder coating based on epoxy and polyester resins. It is formulated to give a satin finish with excellent flow out. The outstanding decorative and protective properties of FF165 are utilised in a wide range of indoor applications.

GLOSS AND COLOUR RANGE

Gloss levels : 30-45% at 60°. A full colour range is available; with the whites and very light shades showing slight overbake yellowing.

APPLICATION

Include home and office furniture, computer hardware, ceiling panels, switchboards etc.

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 mins at 180°

Optimum film thickness : 60 - 80 um

SUBSTRATE AND PRE-TREATMENT

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

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

STORAGE

At temperatures $\leq 25^{\circ}\text{C}$ dry condition and humidity $< 60\%$, FF165 powders may be stored for up to 6 months without affecting their free - flowing properties. The coating thus obtained will still have optimal characteristics.



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PROPERTIES OF THE POWDER

Melting range (Kofler)	: 80 - 106° C
Specific gravity (DIN 55990/3)	: 1.40 - 1.75 (depending on colour)
Particle size distribution (Laser Particle Size Analyser)	
% above 100 um	: Less than 5
% above 32 um	: 50 - 65
Average particle size, um	: 35 - 45

PROPERTIES OF THE COATING

a. Physical and Mechanical

The following are properties typical of FF165 determined on 0.5mm gauge degreased galvanised steel :

Film thickness	: 60 - 80 um
Gloss (ASTM D523, 60°)	: 30 - 45%
Flow out	: excellent
Adhesion (DIN 53151 - 2 mm spacing)	: GT = 0
Pencil hardness (ASTM D3363-Staedtler Lumograph)	: 2H
Buchholz hardness (DIN 53153)	: 100 - 111
Conical mandrel (ASTM D522)	: < 7mm
Direct impact (ASTM D2794 - 0.625 in. diameter ball)	: 40kg.cm
Reverse impact (ASTM D2794 - 0.625 in. diameter ball)	: 40kg.cm
Heat resistance, 30 mins at 180° C	: slight yellowing

b. Salt Spray Resistance

According to ASTM B 117-73 on,

Chromated aluminium, 1000 hrs: no blistering or loss of adhesion

Zinc phosphated steel, 1000 hrs: 3-6 mm undercutting

Iron phosphated steel, 1000 hrs: 8-10 mm undercutting

c. Chemical Resistance

FF165 is resistant to some common inorganic acids, bases and salts, organic acids and solvents.

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.