



## **OXYHIN SDN. BHD.** (393471-X)

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## **TECHNICAL DATA SHEET**

### **OXYPLAST FF5 MATT EPOXY-POLYESTER POWDER COATING**

OXYPLAST FF5 is a thermosetting powder coating based on epoxy and polyester resins. It is formulated to give a matt finish with excellent flow out. This makes it suitable for indoor use as a decorative coating where low gloss finishes are desired.

#### **APPLICATIONS**

Include home and office furniture, audio equipment, lamp covers, computer hardware, ceiling panels, partitioning 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 infrared oven.

Curing: Medium cure 10 min at 200°C (metal temperature)

Optimum film thickness: 60 - 80 µm

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

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

Aluminium alloys : Chromatisation

#### **PROPERTIES OF THE POWDER**

Melting range (Kofler) : 75 - 95°C

Specific gravity (DIN 55990/3) : 1.40 – 1.75 (depending on colour)

Particle size distribution

(Laser Particle Size Analyser)

% above 100 µm : Less than 5

% above 32 µm : 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 of FF5 determined on 0.5mm gauge degreased galvanised steel :

Film thickness (ISO2178)	: 60 – 80 $\mu$ m
Gloss (ISO 2813, 60°)	: 25 $\pm$ 5 %
Flow out	: Good
Adhesion (ISO 2409)	: GT = 0
Pencil hardness (ASTM D3363-Staedtler Lumograph)	: 2H
Conical mandrel (ISO 6860)	: No cracking at 10mm diameter
Direct impact (ASTM D2794 - 0.625in. diameter ball)	: 20kg.cm
Reverse impact (ASTM D2794 - 0.625in. diameter ball)	: 5 kg.cm
Heat resistance, 30 min at 200°C	: 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

FF5 is resistant to some common inorganic acids, bases and salts, organic acids and solvents.

#### d. Humidity Resistance

According to ASTM D2247 on

Chromated aluminium, 500hrs: No blistering or loss of adhesion

### STORAGE

At temperatures  $\leq$  25°C dry condition and humidity < 60%, FF5 powders may be stored for up to 6 months without affecting their free - flowing properties. The coating thus obtained 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.