



OXYHIN SDN. BHD. (393471-X)

HQ: LOT 1, JALAN 13/3, 46200 PETALING JAYA,
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TECHNICAL DATA SHEET

OXYPLAST PU11 OUTDOOR DURABLE POLYURETHANE POWDER COATING

OXYPLAST PU11 is a polyurethane thermosetting powder coating, which offers outstanding film appearance and toughness with superior weathering properties. They are true alternative to high quality liquid paints and exhibits superior chip, mar and scuff resistance in addition to corrosion and chemical resistance.

APPLICATIONS

Include outdoor furniture, air-conditioners, signboards, home appliances etc.

GLOSS AND COLOUR RANGE

Gloss levels range from satin to high gloss: as low as 50% to greater than 90% at 60°.

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

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

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 200°C (metal temperature)

Optimal film thickness: 60 - 80 µm

PROPERTIES OF THE POWDER

Melting range (Kofler) : 85 - 100°C

Specific gravity (DIN 55990/3) : 1.40 - 1.75 (depend on colour)

Particle size distribution
(Laser Particle size analyser)

% above 100µm : Less than 10

% above 32µm : 50 - 65

Average particle size, µm : 35 - 50

PROPERTIES OF THE COATING



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a. Physical and Mechanical

The following are typical properties of PU11 determined on 0.8 mm gauge degreased zinc phosphated steel :

Film thickness (ISO 2178)	: 60 - 80µm
Flow out	: good
Gloss (ISO 2813, 60°)	: 50 to 90% and above
Adhesion (ISO 2409)	: GT= 0
Pencil hardness	
(ASTM D3363 - Staedtler Lumograph)	: H – 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
Erichsen cupping	: > 6 mm

b. Salt spray Resistance

According to ASTM B117-73 on
Zinc phosphated steel, 500hrs : 3-6 mm undercutting

d. Humidity Resistance

According to ASTM D2247 on
Zinc phosphated steel, 500 hrs : No blistering or loss of adhesion

e. Chemical Resistance

PU has been checked to various chemicals (200 hours contact with the coating at ambient temperature.)

5% Sodium Hydroxide, 5 % Sulphuric Acid : Film unchanged

STORAGE

At temperatures not exceeding 30°C and under dry condition, PU11 powder may be stored for up to 6 months without affecting their free flowing properties. The coating thus will still have optimal characteristic.