OPC8000 SERIES FLUORESCENT & NEON POWDER COATINGS

TECHNICAL DATA SHEET

INTRODUCTION

OXYCOLOUR FLUORESCENT & NEON POWDER COATINGS provide a high luminescence quality in a TGIC polyester resin system. This range of intense, fluorescent powders are formulated to give good flow out and semi-gloss to high gloss finish.
Due to the intensity of fluorescent pigments, the OPC8000 series powder coatings are NOT recommended for extended UV exposure.

GLOSS AND COLOUR RANGE

Semi-gloss to high gloss.
Colours available:
OPC8001 Neon Yellow,
OPC8004 Fluorescent Green,
OPC8006 Fluorescent Orange,
OPC8005 Fluorescent Pink
OPC8003 Fluorescent Red Orange,
OPC8002 Fluorescent Red (2 coat process - requires a white base coat)
**Oxytech recommends a white base coat be applied under all OPC8000 series as it improves the fluorescent effect and uniform finish of the coating.*

APPLICATIONS

Used in applications where surfaces are not permanently exposed to UV light: Sporting Equipment, Bicycles, Safety Rails, Fishing Lures, Automotive Parts, etc.

APPLICATION SCHEDULE

May be applied by electrostatic spraying using classic devices which can provide a negative tension of 40 - 80kV.
Optimal film thickness: 60-80µm.
Cure schedule: 10 minutes @ 200ºC metal temperature.
Full cure is obtained when curing the top coat at the recommended schedule.

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 30ºC and under dry conditions, 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

Specific gravity (DIN 55990/3)	:	1.4-1.8 g/cm^3 (depending on colour)
Theoretical Coverage at 60µm	:	11m^2
Pencil Hardness	:	>H

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PROPERTIES OF THE COATING

Physical and Mechanical

The following are properties typical of OPC8000 series powders determined on 0.8mm gauge degreased galvanised steel:

Film Thickness	:	60 - 80µm
Gloss (ASTM D523,60º)	:	80-90+
Flow-out	:	Good
Adhesion (ASTM D3359; Method B)	:	5B
Pencil hardness (ASTM D3363-Staedtler Lumograph)	:	>H
Direct impact (ASTM D2794 – 0.625 in. Diameter ball)	:	**
Reverse impact (ASTM D2794 – 0.625 in. Diameter ball)	:	**

*** Due to the raw materials required to produce such high fluorescent effect powders, the impact resistance in some instances can be compromised. This mechanical property therefore does not indicate a lack of cure or age of powder as it is in the formulation of the powder.*

Resistance to Common Synthetic Detergents

72 hours immersion in 3% solution : No blistering or loss of adhesion
: No significant change in appearance

Salt-Spray Resistance

According to ASTM B117-73 on,
Iron phosphated steel, 500 hours : 1mm undercutting; No blistering

Humidity Resistance

According to ASTM D2247 on
Iron phosphated steel, 500 hours : 1mm undercutting; No blistering

Chemical Resistance

OPC8000 series powders have not been checked for resistance to various chemicals due to the aesthetic nature of the coatings. It is recommended that independent testing is carried out prior to commercial application on the individual chemicals and concentrations which are to be expected in that particular application.

Accelerated Weathering

N/A due to the poor UV resistance of the Fluorescent pigments.

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