



POWDER COATINGS **Product Data Sheet**

ENVIROCRON® PCF FEATURES

PPG's ENVIROCRON® powder coatings are aesthetically pleasing, produce a durable uniform finish and can be custom formulated to produce a variety of finishes from high gloss to low gloss, and in a variety of textures. Features include:

- Available in special technologies: low thickness, low baking, anti yellowing, anti scratch, high thickness, ultra hiding power, ultra edge coverage, high flexibility (Tbend=0), ultra corrosion resistant
- Available in standard, medium and low temperature cure versions
- This product range is formulated without heavy metals
- Available in a wide range of solid and metallic colours, gloss finishes, and surface effects
- Also available in a clear finish
- Good mechanical and chemical resistance
- Can be used as a primer for some applications such as on alloy wheels
- Very good adhesion over electrocoat
- Available in a wide range of packaging, from carton boxes to octabins and big-bags upon request
- Shelf life: from 6 months for metallic effect, to 24-36 months for the other series, stored in well sealed, unopened original packaging, in a dry and well ventilated room at temperature below 30°C and not exposed to sunlight

COMMERCIAL USES

ENVIROCRON® PCF powder coatings are typically used on:

- Domestic appliances
- Domestic radiators
- Various metal furniture
- Automotive parts & accessories
- Metal racks
- Alloy wheels
- Metal Toys
- Glass bottles
- Industrial machinery
- Unit heaters

PRODUCT AVAILABILITY

Gloss (60° gloss meter)	Low Temperature Cure	Medium Temperature Cure	High Temperature Cure
Low: 15 - 30 %		P823 Series	P813 Series
Medium: 31-70 %	P832 Series	P822 Series	P812 Series
High: > 70 %	P831 Series	P821 Series	P811 Series
Textured	P83xT Series	P82xT Series	P81xT Series
Fine Textured	P83xF Series	P82xF Series	P81xF Series

Please refer to the specific Technical datasheet for details on each product.

TECHNICAL PROPERTIES

Film Properties were determined using 50 - 70 µm powder coating over Zinc phosphated steel laboratory panels.

Property	Method	Result
Gloss (60° gloss meter)	ISO 2813	10 - 100
Adhesion	ISO 2409	Gt 0
Hardness Buchholz	ISO 2815	≥ 90
Hardness Pencil	ASTM D 3363	H - 3H
Impact Resistance (direct / reverse)	ISO 6272	> 2.5 N·m
Conical Mandrel	ISO 6860	0 - 10 mm
Erichsen	ISO 1520	≥ 5 mm
Salt Spray Resistance	ISO 7253	1000 hours - pass ≤ 2 mm total scribe, no blisters
Humidity Resistance	DIN 50017	500 hours - pass good adhesion, no blisters



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SUBSTRATE PREPARATION

Powder coatings provide good adhesion to most conductive substrates, provided that the surface is properly cleaned, by removing any oil, grease, and dust contamination, and that it is thoroughly dried. Anticorrosion and durability depend upon the substrate, and type of pretreatment used.

Substrate	Preparation
Aluminium	use a chromate, or phosphorchromate pretreatment, prior to application of powder
Steel	may be simply cleaned by means of surface degreasing, or pretreated with iron, or zinc phosphate (with, or without chrome rinse) for improved performance

When applied to pre-coated parts, such as electrocoat primers, it is important to check that the substrate is free of dirt, as well as other contaminants, and that the parts are electrically grounded.

APPLICATION DATA

Property	Spray
Type	Electrostatic Spray: Corona or Tribo.
Bake (metal temperature)	In the range 10 minutes at 200°C to 30 minutes at 140°C (see data above)
Recommended thickness	Typically 60–80 µm / 35µm for low thickness version
VOC	Essentially zero
Specific Gravity	1.5 ± 0.25 at 100% transfer efficiency
Theoretical Coverage	10 – 12 m²/kg @ 60 µm
Spreading rate	1000 / thickness (microns) * s.g. = m2 per kilo of powder
Flow properties (ISO 8130/5)	> 140
Particle size distribution* (ASTM 5861-95)	Standard Medium diameter X ₅₀ = 30 - 35 µm (22 -25 for Low Thickness versions)

* Particle size distribution can be customized to application needs.

The recycled powder has to be added continuously to the fresh powder to avoid a change in the particle size distribution. Please follow the process instructions for special products.

CURING/DRYING*		
P811	Standard Cure	10 min @ 180°C 7 min @ 200°C
P821	Medium Cure	20 min @ 160°C 10 min @ 180°C
P831	Low Cure	20 min @ 150°C 10 min @ 160°C

*Consider 5 minutes more in case of laboratory static ovens

RECOATING
Recoating just requires an electric contact to the earth. If re-applying onto textured powder, the surface should be sanded prior to application.
HEALTH AND SAFETY
For comprehensive Health, Safety, and Environmental advice, please refer to the relevant Material Safety Data Sheets, and information printed on the product label.

The technical data presented in this bulletin is based upon information believed by PPG to be currently accurate. However, no guarantees of accuracy, comprehensiveness, or performance are given or implied. Continuous improvements in coatings technology may cause future technical data to vary from what is in this bulletin. Contact your PPG representative for the most up-to-date information.				
PPG Industries (UK) Ltd Birmingham, UK Tel.: +44 121 423 7345 Fax: +44 121 423 7303	PPG Coatings Deutschland GmbH Bochum, GERMANY Tel: +49 234 8690	PPG Industries France S.A Saultain, FRANCE Tel: +33 3 27 14 97 00 Fax: +33 3 27 14 98 94	PPG Industries Italia Spa Felizzano, ITALY Tel: +39 (0)131 77 47 11 Fax: +39 (0)131 77 24 96	PPG Industries Sales, inc Istanbul, TURKEY Tel: +90 212 286 2150 Fax: +90 212 286 21 59
PPG Industrial Coatings B.V. Veenendaal, NETHERLANDS Tel.: +31 318 567 800	PPG Iberica S.A Rubi (Barcelona), SPAIN Tel: +34 93 586 7429 Fax: +34 93 586 7430	PPG Dr. A. Schoch AG (Ltd.) Burgdorf, SWITZERLAND Tel: +41 421 42 42 Fax: +41 421 42 99	PPG Polifarb Cieszyn S.A. Cieszyn, POLAND Tel: +48 33 851 71 00 Fax: +48 33 852 24 93	
PPG WEB SITES: www.ppg.com & www.ppgindustrialcoatings.com				