



# HY43 SERIES

NOVEMBER 2002

## Hybrid Thin Film Powder Coating



### Product Data

Extensive development has produced a range of Thin Film, High Flow Epoxy/Polyester formulations that offer coatings with the following advantages over traditional hybrid powder coatings. These properties include:

- Ability to realise large application cost savings
- Improved UV resistance to that of pure epoxy
- Excellent mechanical properties
- Very good resistance to water, detergents and a range of chemicals
- Excellent powder transfer and spray characteristics
- Excellent flow and gloss
- Superb coverage / flow at film builds down to 20µm.

### Uses

The Hybrid Thin Film (HY4) series is mainly used for interior application or light duty exterior areas such as:

- Whiteware goods e.g. washing machines, ovens, refrigerators.
- Cookware e.g. pots, camp stoves, toasters.
- Heater panels.
- Indoor furniture e.g. chairs, tables, lighting ware.
- Metal architraves and doors.
- Metal cabinets e.g. filing, lockers, tool boxes etc.

### Colour Availability

Extensive range made to individual colours and gloss levels.

### Substrates

Cold rolled mild steel (CRS)  
Zinc coated steels  
Aluminium alloys

### Specific Gravity

1.2 to 1.8, dependent on colour

### Pre-treatment

CRS:	Zinc or iron phosphate
Zinc Coated Steels:	Zinc phosphate or chromate conversion
Aluminium Alloys:	Chromate conversion

### Application

The Hybrid Thin Film series is suitable for both Corona and Tribostatic Electrostatic spray equipment.

Fluidised methods can be used.

### Curing

Standard conditions are: (object temp)

10 mins @ 190 deg C or 15 mins @ 180 deg C.

### Film Properties

The recommended thickness for the cured powder film is 20-40 microns. We advise not to exceed 100 microns.

Mechanical tests carried out on lightweight, zinc phosphate treated panels with 50 microns gloss finish film. Panels baked for 10 mins @ 190 deg C.

### Mechanical:

Flexibility (conical mandrill) ASTM D522: Pass 3mm

Adhesion (2mm crosshatch) BS3900-E6: Pass

Impact resistance BS3900-E3: 160 inch.lb Pass

Pencil hardness: 2H

### Chemical:

Salt spray (ASTM-B117): Pass @ 1000 hours, <3mm from scribe.

Cyclic humidity BS3900-F7: Pass no blistering or loss of gloss after 1000 hours @ 40 deg C.

### Exterior Durability:

Direct UV exposure will result in some chalking and loss of gloss after 3-6 months. UV light filtered by glass does not affect chalking. For continuous exposure to weather it is recommended that PPG Envirocron polyesters be used.

### Storage and Packaging

Packaging: Cardboard boxes – 20kg. Bulk packs available to suit your requirements.

Shelf Life: 12 months minimum @ <30° C/dry. All bags must be sealed before storage.

Store in a cool, dry area.

### Health & Safety

PPG Envirocron powder coatings can generally be regarded as inherently non-toxic.

Powder on the skin should be washed off using soap and water. Powder in the eyes should be washed out with water for 15 minutes.

Avoid breathing airborne dusts: wear an approved dust mask.

Ovens should be exhausted to atmosphere.

Users should refer to "Code of Safe Practice" as supplied by Paint Makers' Association (UK) and NZ Department of Labour.

For further information, refer to the Material Safety Data Sheet for this product.

### CAUTION:

**Improper use and handling of this product can be hazardous to health.**

**This product is to be used by those knowledgeable about proper application methods. PPG Industries makes no recommendation about the types of safety measures that may need to be adopted because these depend on application environment and space, of which PPG Industries is unaware and over which it has no control.**

**If you do not fully understand these warnings and instructions or if you cannot strictly comply with them, do not use the product.**

***This product is for professional use only. Not for residential use.***

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