



# HY53 SERIES

NOVEMBER 2002

## Epoxy/Polyester Hybrid Powder Coating



### Product Data

Extensive development has produced a range of epoxy/polyester formulations called Hybrids that offer coatings with superior properties for main interior applications. These properties include:

- Improved UV resistance to that of pure epoxy
- Very good overbake resistance
- Excellent mechanical properties
- Very good resistance to water, detergents and a range of chemicals
- Excellent powder transfer and spray characteristics
- Excellent flow and gloss

### Uses

Hybrid (HY) series are mainly used for interior applications or light duty exterior areas such as:

- Whiteware goods e.g. washing machines, ovens, refrigerators
- Cookware e.g. pots, camp stoves, toasters
- Heater panels
- Bicycle frames, mudguards
- Indoor furniture e.g. chairs, tables, lighting ware
- Metal architraves and doors
- Bathroom fittings e.g. shower doors, taps, soap holders
- Metal cabinets e.g. filing, lockers, tool boxes etc

### Colour Availability

Extensive range made to individual colours, textures and gloss levels. Minimum run of nominal 80kg for non-stock colours.

### Substrates

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

### Pre-treatment

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

### Application

The Hybrid Smooth series is suitable for Corona Electrostatic spray equipment.

Fluidised methods can be used.

For information regarding tribostatic application, please contact your local PPG Envirocron Technical Sales Representative.

### Curing

10 mins @ 190 deg C, 15 mins @ 180 deg C (object temp). Please note that low bake or fast curing systems are also available.

### Film Properties

The recommended thickness for the cured powder film is 60-90 microns. It is not advised to go below film thickness of 50 microns or exceed 120 microns.

Mechanical tests carried out on lightweight, zinc phosphate treated panels with 60 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 GTO

Erichson Cupping BS3900-E4: Pass >7mm

Hardness (4000g) BS3900-E2: Pass (no penetration)

Impact Resistance BS3900-E3: 200 inch.lb, 2.5mm pass

### 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.

### Specific Gravity

1.2 to 1.8, dependent on colour

### 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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