



EP53 SERIES

Epoxy Powder Coating



Product Data

Epoxy resins were the first type to be used in the manufacture of powders, and still offer advantages mainly in areas where superior chemical resistance and mechanical properties are required.

Main advantages are:

- Excellent adhesion and hardness
- Excellent chemical resistance
- Very fast or low bake formulations available
- Excellent powder transfer and spray characteristics
- Excellent abrasion and corrosion resistance
- Full range of colours, gloss levels and textures

Uses

Epoxy EP series are mainly used for interior application and articles that are to be exposed to severe chemical environments, such as:

- Indoor furniture e.g. chairs and tables
- Gardening tools e.g. lawn mowers, rakes, forks and shovels
- Industrial waste equipment e.g. valves, pipes, tanks
- Pipeline coatings e.g. gas, water, fuel pipelines
- Electrical switchgear, cabinets, cable ducting

Colour Availability

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

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 Epoxy series is suitable for Corona Electrostatic spray equipment.

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

Curing

Refer specific type, but standard conditions are:

10 mins @ 190 deg C (object temp)

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 40 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: 160 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.

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.

Chemical & Solvent Resistance

Generally excellent resistance to acids, alkalis, oil and most solvents at normal temperatures.

Storage and Packaging

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

Shelf Life: 12 months minimum @ 35° 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.

Technical information given verbally or in writing is based on knowledge and research, given in good faith and believed to be reliable, but no guarantee of accuracy is made or implied. Since methods and conditions of use are beyond our control, all merchandise is sold and received subject to the condition that our liability whether express or implied for any defect in quality, or for any lack of fitness for the specified use thereof, is limited to the return of the purchase price if written claim is made within 14 days from date of delivery. It is recommended that the user makes his or her own tests to determine the suitability of the product for his own requirements. Freedom from patent restrictions is not implied.

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