



EP524/2247 ENVIROZINC

AUGUST 2008

Zinc Rich Epoxy Primer



Product Data

Recent developments of the Epoxy series have resulted in the production of an Epoxy Based Zinc Rich Primer Powder Coating, designed as a sacrificial layer for ferrous substrates, improving their service life and film integrity.

Envirozinc, EP524/2247 is a smooth satin coating with a high level of Zinc, providing cathodic corrosion protection and excellent adhesion properties.

Other properties include:

- Increased hardness;
- Improved abrasion resistance;
- Excellent chemical resistance; and
- Excellent flowing out of the powder.

Economical Advantages

The replacement of the traditional wet paint Zinc Rich Primer with Envirozinc, EP524/2247 enables a single applicator to perform the entire coating process, from the substrate cleaning stage to the application of the final topcoat.

This provides;

- Reduced transportation costs;
- A shorter lead-time for product coating completion, that reduces the risk of flash rusting occurring;
- Reduced time delays, as the coating process is able to be undertaken "in house".

Uses

Envirozinc, EP524/2247 provides excellent corrosion protection or inhibition on Ferrous substrates, such as:

- Garden tools e.g. rakes, forks and shovels
- Industrial waste equipment e.g. valves, pipes and tanks
- Agricultural Machinery
- Pipeline coatings e.g. gas, water and fuel pipelines
- Electrical switch gear, cabinets and cable ducting

Specific Gravity

2.0-2.2

Curing

Standard curing conditions for single coat application are:

10 minutes @ 200°C (object temperature).

Curing conditions for powder two coat applications are:

Green Cure for 3 minutes @ 200 °C (object temperature), then cure top coat as per standard curing schedule.

It is not recommended that temperatures of less than 180°C be used, as performance may be impaired.

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 were carried out on lightweight, zinc phosphate pre-treated panels with 50 micron (DFT) finish film. Panels were baked for 10 mins @ 200°C (object temp).

Mechanical

Adhesion (crosshatch) BS3900:E6 Pass GTO

Rev impact resistance BS3900-E3 Pass 80-inch lb

Pencil hardness AS1580.405.1 2H

Chemical

Salt Spray (ASTM-B117): Pass @ 2000 hours, <3mm from scribe.

Cyclic Humidity BS3900-F7: Pass no blistering or loss of gloss after 1000hrs.

Temperature Stability

Excellent for continuous exposure up to 120 deg C.

Chemical & Solvent Resistance

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

Exterior Durability

Direct UV exposure will result in some chalking and loss of gloss. It is noted that UV light filtered by glass has minimal effect on chalking.

Envirozinc EP524/2247 is not recommended for exterior use without a topcoat.

Substrates

Cold rolled mild steel (CRS)

Pre-treatment

Surfaces should be grit blasted with angular grit to SA 2.5 and they must be free of contaminants such as, mill scale, oxides, greases etc.

For information regarding pre-treatment, please contact your local PPG Industries Technical Sales Representative.

Application

Envirozinc is suitable for Corona Electrostatic spray equipment.

Envirozinc, EP524/2247 has a higher than average specific gravity, therefore box feeders and fluidising hoppers will need to be tested to ensure adequate mixing. As a result Envirozinc, EP524/2247 may require increased air pressure or vibration levels, than standard powder coatings.

Recommended Application Procedure

The following steps should be used to achieve maximum properties from Envirozinc, EP524/2247.

- Wash the surface to remove any contaminant such as, dirt, grease, lubricant etc. 87 Allsol is a suitable product for this initial process.
- If required surfaces should be grit blasted with angular grit to SA 2.5 finish.
- A suitable pre-treatment process should be used to avoid flash rusting and to improve adhesion properties of the coating system. Please refer to pre-treatment section.
- Apply Envirozinc, EP524/2247 between 60 to 90 microns, and "Green Bake" (partially cure) for 3 minutes @ 200°C (object temperature). The "Green Bake" process is used to promote maximum resin interaction and excellent inter-coat adhesion.
- Tests have also confirmed that curing EP524/2247, Envirozinc for 10' @ 200°C is also acceptable and still provides excellent adhesion with the topcoat.

Immediately after the "Green Bake" stage, apply the topcoat and cure as per instructions on the datasheet or powder container label.

Availability

Made to individual order.

Storage and Packaging

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

Shelf Life: 6 months minimum @ <30 deg 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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