

Crystic Topcoat LS 97PAX

Low Styrene Content Isophthalic Topcoat for Spray Application (Available in a Wide Range of Colours)

Introduction

Crystic Topcoat LS 97PAX is a high performance isophthalic topcoat. It is filled, pre-accelerated and formulated for spray application. This product is available in a wide range of colours and the information contained in this technical datasheet also applies to pigmented versions.

Applications

Crystic Topcoat LS 97PAX is designed for use where smooth finish is required on the reverse side of a laminate.

Product characteristics

The product should be conditioned at workshop temperature (18°C – 25°C) and mixed before use. Crystic Topcoat LS 97PAX requires the addition of a catalyst to start the curing reaction. Use Butanox M50 (or other equivalent catalyst) and incorporate this into the gelcoat at 1–2% v/w. Unsaturated polyester products release heat when they cure in bulk. If manually adding catalyst to the product prior to spraying, do not prepare more material than is required to complete the job and spray within 3 minutes. Ensure that all equipment is thoroughly cleaned after use.

Do

- Gently stir the topcoat before use, by hand or with a low shear mixer
- Ensure workshop temperature is between 18 and 25°C
- Spray at the minimum pressure to achieve an acceptable spray pattern
- Apply the gelcoat in thin even passes, building up the film thickness to 0.5- 0.6 mm wet
- Ensure adequate mould ventilation.

Don't

- Exceed a wet film thickness exceeding 0.8 mm or drainage may occur
- Allow vapour to be retained in deep mould sections, this can slow cure.

Additives

The addition of fillers can adversely affect the quality of the surface achieved.

Recommended Testing

It is recommended that customers test Topcoat LS 97PAX before use under their own conditions of application to ensure the required surface finish is achieved.

Post Curing

Laminates take time to cure fully and develop mechanical properties at room temperature. This process can be accelerated by post-curing at elevated temperature. Please seek advice for your specific needs. Optimum properties can normally be obtained by allowing curing for 24 hours at ambient temperature followed by 3 hours at 80°C.

Typical Properties

The following table gives typical liquid properties of Crystic Topcoat LS 97PAX when tested in accordance with Scott Bader test methods.

| Properties for 'RAL 9003' Topcoat | Method | Typical Value |
|--|--------|---------------|
| Viscosity, 25°C 0.6s-1 | 3.41 | 250 poise |
| Viscosity, 25°C 4500s-1 | 3.6 | 2.4 poise |
| Specific Gravity at 25°C (white gelcoat) | 8.01 | 1.2 |
| Stability at 20°C | - | 3 months |
| Geltime 25°C 2% Butanox M50 (or other equivalent catalyst) | 5.25 | 7 |

Typical Properties

The following are typical mechanical properties obtained from the topcoat base resin following a postcure of 24hrs at 50°C and tested as specified in BS EN ISO12215-1: 2000.

| Mechanical properties | Method | Value (2 s.f.) |
|-----------------------------------|-----------------------|----------------|
| Barcol Hardness (Model 934-1) | EN59 | 36 |
| Heat Deflection Temperature | BS EN ISO 75-2 (1996) | 63°C |
| Water Absorption 24 hours at 23°C | BS EN ISO 62 part 6.2 | 17 mg |
| Tensile Strength | BS EN ISO 527- 2 | 74 MPa |
| Elongation at Break | BS EN ISO 527- 2 | 4.7 % |
| Flexural Strength | BS EN ISO 178 | 110 MPa |
| Flexural Modulus | BS EN ISO 178 | 2800 MPa |

Storage

Crystic Topcoat LS 97PAX should be stored in its original container and out of direct sunlight. It is recommended that the storage temperature should be less than 20°C where practical, but should not exceed 30°C. Ideally, containers should be opened only immediately prior to use.

Packaging

Crystic Topcoat LS 97PAX is supplied in 25kg and 225kg containers.

Health & Safety

Please refer to Material Safety Data Sheet.

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