

CRYSTIC[®] GELCOAT 44PA

Sandable Spray Gelcoat

Introduction

Crystic Gelcoat 44PA is a pre-accelerated, isophthalic, filled, sandable gelcoat. It has been specifically designed for applications that are to be post-painted. Crystic Gelcoat 44PA has been formulated for spray application. The gelcoat is available in a limited range of colours and the information contained in this leaflet also applies to these pigmented versions.

Formulation

Crystic Gelcoat 44PA should be allowed to attain workshop temperature (18-25°C) before use. Stir well by hand, or with a low shear mixer to avoid aeration, and then allow to stand to regain thixotropy. The product requires only the addition of catalyst to start the curing reaction. The recommended catalyst is Andonox[®] KP-9 or Norox[®] MEKP-925 H, which should be added at 2% into the gelcoat. (Please consult our Technical Service Department if other catalysts are to be used).

The catalyst should be thoroughly incorporated into the gelcoat, with a low shear mechanical stirrer, where possible. 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.

Pot Life

| Temperature | Pot Life In Minutes |
|-------------|---------------------|
| 25°C | 6 |

Curing should not be carried out at temperatures below 15°C. The gelcoat, mould and workshop should all be at, or above, this temperature.

N.B. Peroxide catalysts are highly reactive and may decompose with explosive violence, or cause fires, if they come into contact with flammable materials, metals or accelerators. For this reason they must never be stored in metal containers or be mixed directly with accelerators.

Additives

Crystic Gelcoat 44PA is supplied in a limited range of colours. This eliminates the potential for mixing errors with small quantities of pigment paste. The gelcoat is filled, so the addition of further quantities of filler, or pigments, may adversely affect the properties of both liquid and cured gelcoats.

Post Curing

Satisfactory laminates for many applications can be made with this gelcoat by curing at workshop temperature (25°C).

Application

For normal moulding, the application of Crystic Gelcoat 44PA should be controlled to 0.4-0.5mm (0.015-0.020 inch) wet film thickness. As a guide, approximately 450-600 g/m² of gelcoat mixture (depending on pigment) will give the required thickness when evenly applied.

Do

- Gently stir the gelcoat before use by hand or low shear mixer.
- Ensure the gelcoat has attained workshop temperature of 18°C-25°C before use. (Temperatures below 18°C will require higher pressure to achieve an acceptable spray pattern and this will encourage porosity).
- Spray at the minimum practical pressure whilst maintaining an acceptable spray pattern and full fan width.
- Apply a mist coat and then build up thickness in long, even passes of 0.125mm (0.005 inch) until the recommended wet film thickness of 0.5-0.625mm (0.020-0.025 inch) is reached. This will minimise porosity and colour defects.

Don't

- Stir the gelcoat with high shear mixers as this will temporarily break down the thixotropy leading to drainage.
- Exceed a wet film thickness of 0.625mm (0.025 inch) as thick films encourage air retention.
- Apply excessive thickness in corner areas as this can cause pre-release.

Recommended Testing

It is recommended that customers test all pigmented gelcoats before use under their own conditions of application to ensure the required surface finish is achieved.

Post-Curing

Satisfactory laminates for many applications can be made with this gelcoat by curing at workshop temperature (20°C).

Physical Data - Uncured

The following tables give typical properties of Crystic Gelcoat 44PA when tested in accordance with BS2782:

| Property | Unit | Liquid Gelcoat |
|---------------------------------------|---------|----------------|
| Viscosity at 25°C | | Thixotropic |
| Specific Gravity at 25°C | | 1.1 |
| Stability at 20°C | Months | 3 |
| Geltime at 25°C Using 2% Andonox KP-9 | Minutes | 6 |

Physical Data - Uncured

| Property | Unit | Fully Cured *Gelcoat |
|---|------|----------------------|
| Barcol Hardness (Model GYZJ 934-1) | | 38 |
| Water Absorption 24 hrs at 23°C | mg | 16 |
| Deflection Temperature Under Load† (1.80 MPa) | °C | 70 |
| Elongation at Break | % | 1.2 |
| Tensile Strength | MPa | 46 |
| Tensile Modulus | MPa | 5235 |

* Curing Schedule - 24hrs at 20°C, 3hrs at 80°C.

† Curing Schedule - 24hrs at 20°C, 5hrs at 80°C, 3hrs at 120°C.

Storage

Crystic Gelcoat 44PA should be stored in the dark in suitable, closed containers. 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 Gelcoat 44PA is supplied in 25Kg and 225Kg containers.

Health and Safety

Please see separate Material Safety Data Sheets.

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