

CRYSTIC[®] Gelcoat 43PA

Low Viscosity Sandable Brush Gelcoat

Introduction

Crystic Gelcoat 43PA is a pre-accelerated, isophthalic, filled, sandable gelcoat. It has been specifically designed for applications that are to be post-painted. Crystic Gelcoat 43PA has been formulated for brush 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 43PA 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 Norox KP-9 and 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.

Pot Life

| Temperature | Pot Life in Minutes |
|-------------|---------------------|
| 25°C | 10 |

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 43PA 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 43PA should be controlled to 0.4-0.5 mm (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

- Use clean brushes and containers.
- Ensure that the gelcoat is well stirred in its container before measuring quantities for use.
- Measure catalyst carefully and thoroughly stir it into the gelcoat.
- Ensure that the mould temperature is close to that of the gelcoat. Even if the gelcoat is kept warm in its container, applying it to a cold mould will absorb all the heat and cause it to cure slowly. Applying cold gelcoat with an appropriate catalyst level to a warm mould will result in too fast a film geltime and possibly cause pinholes.
- Brush the gelcoat onto the mould using even, long, vigorous strokes, dipping the brush into the gelcoat often. As a rule, each brush load should cover the length of your forearm.
- Ensure that the gelcoat is well sheared by the brush when applying it. The bristles must touch the mould surface.
- Touch up thin patches by adding extra gelcoat, not by brushing over from the gelcoat nearby.

DON'T

- Use brushes contaminated with cleaning solvents or moisture.
- Brush the gelcoat out too far – it is designed to be applied at 0.5mm thickness with the proper brush technique.
- Apply too thick a layer – this can cause pre-release, and runs can cause colour streaking.
- Mix fillers into gelcoat.
- Thin with styrene, acetone or thinners.
- Allow puddles and blobs of gelcoat to accumulate on the mould, or pour it onto the mould and use this as a reservoir for brushing. This may cause pinholes and colour streaking.
- Begin laminating too soon. The back-up time will vary with temperature, but a good test is to touch the back of the gelcoat with a thumb. It will feel tacky but none should transfer to the skin.
- Use low catalyst levels in order to give a long pot life. This can result in undercure. Rather mix smaller quantities so they can be used up within the pot life.

Typical Properties

The following tables give typical properties of Crystic Gelcoat 43PA when tested in accordance with BS2782:

| Property | | Liquid Gelcoat |
|--|---------|----------------|
| Viscosity @ 25°C | | Thixotropic |
| Specific Gravity @ 25°C | | 1.3 |
| Stability in the dark @ 20°C | months | 3 |
| Gel time @ 25°C using 2% Norox KP-9 catalyst | minutes | 10 |

| Property | | Fully cured *Gelcoat |
|---|-----|----------------------|
| Barcol Hardness (model GYZJ 934-1) | | 30 |
| Water Absorption 24 hrs @ 23°C | mg | 20 |
| Deflection Temperature under load† (1.80 MPa) | °C | 52 |
| Elongation at Break | % | 2.4 |
| Tensile Strength | MPa | 41 |
| Tensile Modulus | MPa | 2600 |

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

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

Storage

Crystic Gelcoat 43PA 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 43PA is supplied in 25 kg and 225 kg containers.

Health and Safety

Please see separate Material Safety Data Sheets

Technical Leaflet No 102.22SA

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Before you use this information, kindly verify that this data sheet is the latest version.

All information is given in good faith but without warranty. We cannot accept responsibility or liability for any damage, loss or patent infringement resulting from the use of this information.

SCOTT BADER COMPANY LIMITED

Scott Bader (Pty) Ltd
Reg. No. 93/00466/07
1 Lubex Road,
Hammarisdale
P.O. Box 1539, Hillcrest,
3650. South Africa
Tel: +27 (0) 31 736 8500
Fax: +27 (0) 31 736 8511

Gauteng
Broadacres Business
Centre
Cnr Cedar Rd and 3rd
Ave
Broadacres, Sandton
Tel: (011) 064 5673

KwaZulu Natal
1 Lubex Road,
Hammarisdale
Tel: (031) 736 8500

Eastern Cape
Freightpak Building
Chevrolet St
Markman Industrial
Port Elizabeth
Tel: (041) 409 783

Western Cape
Unit 4B
Tyger Lake
Niagara Way
Tyger Valley
Cape Town
Tel: (021) 914 6011

