

# CRYSTIC<sup>®</sup> GELCOAT 6028PA WHITE

## White Self-Levelling Isophthalic Polyester Gelcoat for Flat Panel Laminates

### Introduction

Crystic Gelcoat 6028PA White is a pre-accelerated gelcoat with outstanding water and weather resistance. It has been formulated for application by short nap (mohair) roller to flat level surfaces, so that the film of gelcoat self-levels after application. It is pigmented using a highly UV resistant grade of titanium dioxide.

### Applications

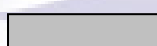
Crystic Gelcoat 6028PA White is designed for use in the marine and transport industries. It is not suitable for general moulding requirements where vertical surfaces have to be covered. For these, Crystic Envirotec LS88PA (brush) or LS97PA (spray) should be used.

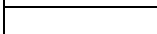

### Formulation

Crystic Gelcoat 6028PA White should be allowed to attain workshop temperature (18°C - 20°C) before use. Stir well by hand, or with a low shear mixer to avoid aeration, and then allow to stand to regain thixotropy. Crystic Gelcoat 6028PA White requires only the addition of catalyst to start the curing reaction. The recommended catalyst is Andonox<sup>®</sup> KP9, and this should be added at 1 - 3% 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

The temperature, and the amount of Andonox<sup>®</sup> KP9 catalyst affect the geltime, and hence the pot life of Crystic Gelcoat 6028PA White. The below table shows geltime in minutes of Crystic Gelcoat 6028PA White at varying temperatures, with 2% Andonox<sup>®</sup> KP9 catalyst.

 = Combination not recommended.

Catalyst Type		Andonox <sup>®</sup> KP9		
		1%	2%	3%
Catalyst Addition		Geltime In Minutes		
Temperature	15°C		30	20
	25°C	30	10	7
	35°C	16	7	

The gelcoat, mould and workshop should all be at or above 15°C before curing is carried out. Scott Bader (Pty) Ltd. will not be liable for problems caused by use at lower temperatures than recommended.

**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.

## Application

For flat panel 'skins', the application of Crystic Gelcoat 6028PA White should be controlled to 0.4 - 0.6 mm (0.015 - 0.024 inch) wet film thickness. As a guide, approximately 500 - 800g/m<sup>2</sup> of gelcoat mixture will give the required thickness when evenly applied.

### Do

- Use clean rollers 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.
- Roll the gelcoat onto the mould using even, long, smooth strokes. The gelcoat can be applied by dipping and rolling, or by pouring a strip along the mould edge and rolling it from there; but it is essential to ensure the gelcoat is thoroughly rolled out.
- Touch up thin patches by adding extra gelcoat, not by rolling over from the gelcoat nearby.

### Don't

- Use rollers contaminated with cleaning solvents or moisture.
- Roll the gelcoat out too far – it is designed to be applied at 0.5mm thickness with the proper technique.
- Apply too thick a layer – this can cause cracking when the skins are rolled for storage.
- Mix fillers into gelcoat.
- Thin with styrene, acetone or thinners.
- 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.

## Additives

The addition of fillers to Crystic Gelcoat 6028PA White can adversely affect the water and weather resistance of the cured gelcoat. Crystic Gelcoat 6028PA White can be used as a topcoat provided that 2% Crystic Solution W010 is added to overcome the normal tackiness. Should coloured gelcoat be required, Crystic Gelcoat 6028PA can be supplied in a range of colours; the coating weight will vary according to the specific gravity of the pigments used and users are urged to carry out their own tests before embarking on production.

## Post-Curing

Satisfactory laminates for many applications can be made with Crystic Gelcoat 6028PA White by curing at workshop temperature (20°C). However, for optimum properties, laminates must be post cured before being put into service. The moulding should be allowed to cure for 24 hours at 20°C, and then be oven-cured for 3 hours at 80°C.

## Physical Data - Uncured

The following table gives typical properties of Crystic Gelcoat 6028PA White when tested in accordance with BS2782.

Property	Units	Liquid Gelcoat
Appearance		White
Viscosity at 25°C, Brookfield RVT at 100 rpm	Centipoise	1600
Thixotropic Index	Ratio	3.4
Volatile Content	%	31
Pot Geltime at 25°C Using 2% Andonox <sup>®</sup> KP9 Catalyst	Minutes	10
Film Geltime at 25°C Using 2% Andonox <sup>®</sup> KP9 Catalyst	Minutes	18
Touch Dry Time at 25°C Using 2% Catalyst M	Minutes	50
Stability at 20°C	Months	3

## Storage

Crystic Gelcoat 6028PA White 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. Where they have to be stored outside, it is recommended that drums be kept in a horizontal position to avoid the possible ingress of water. Wherever possible, containers should be stored under cover.

**Packaging**

Crystic Gelcoat 6028PA White is supplied in 25Kg and 225Kg containers.

**Health and Safety**

Please see the applicable Material Safety Data Sheets, depending on the curing system used.

Technical Leaflet No. SBPTY062.3

Version 2 : February 2013

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