

# CRYSTIC<sup>®</sup> 2000PA

## General Purpose Polyester Resin

### Introduction

Crystic<sup>®</sup> 2000PA is a preaccelerated, general purpose unsaturated polyester resin. It has been specifically designed for non-critical applications. Laminating can be carried out by hand-lay or spray application. Crystic 2000PA is available in a coloured version, and the information contained in this leaflet also applies to this resin. It cannot be colour matched to specific requirements.

### Applications

For normal mouldings made with chopped strand mat, a resin to glass ratio of about 2-2.5:1 should be achievable with Crystic 2000PA.

### Versions

Crystic 2000PA is also available as a coloured version.

### Formulation

Crystic 2000PA is formulated for room temperature curing applications. It requires only addition of the correct amount of Norox<sup>®</sup> KP9 catalyst to start the curing reaction. The recommended formulation is given in table 1.

**Table 1:** Formulation for curing Crystic 2000PA.

Component	Parts by weight
Crystic <sup>®</sup> 2000PA	100
Norox KP9 or Norox <sup>®</sup> MEKP925H	1.0-3.0

The catalyst must be stirred thoroughly into the resin shortly before use. Curing should not be carried out at temperatures below 15°C. Scott Bader (Pty) Ltd. will not be liable for problems caused by use at lower temperatures than recommended. The resin must be allowed to attain workshop temperature (15-30°C) before being formulated for use.

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.

Crystic 2000PA is formulated for use between 15°C and 30°C. It is recommended that workshop temperatures be maintained within this range.

At temperatures above 30°C, the gel time even at 1% Catalyst M can be so short that there is insufficient working time to use up all the resin that has been mixed. In such cases, do not use less than 1% catalyst as this can cause undercure. Rather use Norox MEKP-925H. If using 1% Norox MEKP-925H still gives too short a working time, do not use less than this. Rather mix smaller quantities of resin at a time so that it can all be used within the working time available.

At temperatures below 15°C, the curing reaction can be so slow that there is a high probability of undercure of the resin, even with over 2.5% Norox KP9. Do not use more than 3% catalyst as that will not speed up the geltime appreciably or result in a faster cure; in fact it can further retard the cure. Rather warm up the resin and working area so that it is above 15°C.

### Additives

Crystic 2000PA is supplied in two versions - clear and coloured. Moulders can add their own pigment pastes to the clear version if required. However, no guarantees can be given concerning colour reproducibility from batch to batch. Any additions of fillers or pigments may adversely affect the properties of the resin. Users should satisfy themselves that any additions to the resin will not affect their requirements.

**Post Curing**

Satisfactory laminates for non-critical applications can be made with Crystic 2000PA by curing at workshop temperature (25°C).

**Liquid Properties**

The most important typical liquid properties of Crystic 2000PA are given in Table 2 below:

**Table 2:** Typical liquid properties of Crystic 2000PA.

Property	Units	Nominal value
Viscosity at 25°C: Brookfield RVT sp. 3 at 100rpm	centipoise	400
Thixotropic index	ratio	1.5
Appearance	visual	Opaque
Stability in the dark at 25°C	months	3
Geltime at 25°C using 1% Norox KP9 catalyst	minutes	24

**Storage**

Crystic 2000PA should be stored in the dark in suitable closed containers. It is recommended that the storage temperature should be less than 25°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.

**Packaging**

Crystic 2000PA is supplied in 25kg kegs and 225kg drums. Bulk supplies can be delivered by road tanker.

**Health and Safety**

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

Technical Leaflet No 102.22SA  
August 2013

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.

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