

CRYSTIC[®] Flowcoat 402PA

Natural Orthophthalic Polyester Flowcoat

Introduction

Crystic Flowcoat 402PA is a pre-accelerated Flowcoat with excellent scuff resistance, designed for use in general purpose GRP mouldings. It is based on a high quality orthophthalic unsaturated polyester resin. It is suitable for all general moulding requirements. It has been formulated for brush application.

Applications

Crystic Flowcoat 402PA is designed for application to the back of GRP mouldings, as a decorative, protective coating for the laminate. It will resist mild chemical attack from cleaning agents, etc, but it is not designed for use on the inner surfaces of vessels holding water. For such an application, Crystic[®] Topcoat 507PA is recommended.

Formulation

Crystic Flowcoat 402PA 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 Flowcoat 402PA requires only the addition of catalyst to start the curing reaction. The recommended catalyst is Norox[®] KP9. This should be added at 1-3% into the Flowcoat. In hot weather, the pot life can be so short even with 1% Norox KP9 catalyst that it is difficult to avoid the material gelling in the pot. Do not use less than 1% Norox KP9 catalyst. Rather use Norox[®] MEKP-925H. The catalyst should be thoroughly incorporated into the Flowcoat, with a low shear mechanical stirrer where possible.

Pot Life

The temperature, and the amount of Catalyst M or O affect the geltime, and hence the pot life of Crystic Flowcoat 402PA. Table 1 shows this relationship.

Table 1: Geltime in minutes of Crystic Flowcoat 402PA at varying temperatures.

= Combination not recommended.

Catalyst type		Norox KP9			Norox MEKP-925H		
		1%	2%	3%	1%	2%	3%
Catalyst addition		Geltime in minutes					
Temperature	15°C		16	14			
	25°C	10	8		19	9	7
	35°C	5	4		8	5	4

The Flowcoat, moulding 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

Crystic Flowcoat 402PA is designed for application by brush or roller to the back of GRP laminates in order to protect the fibres from water attack and to provide an attractive finish. Coverage is affected greatly by the evenness of the laminate. Measures taken to achieve a smooth finish, such as sanding or the use of surface tissue, will reduce the amount of Crystic Flowcoat 402PA required to cover the surface. In normal use, the application of should be controlled to 0.5-0.6 mm wet film thickness. As a guide, approximately 600-800 g/m² of Flowcoat mixture will give the required thickness when evenly applied.

Additives

The addition of fillers to Crystic Flowcoat 402PA can adversely affect the water and scuff resistance of the cured Flowcoat. It may be pigmented to a range of shades using Crystic Pigment Pastes. Should white Flowcoat be required, Crystic Flowcoat 407PA White is recommended.

Typical Requirements

The following table gives typical properties of Crystic Flowcoat 402PA.

Table 2: Typical properties of liquid Crystic Flowcoat 402PA.

Property	Units	Nominal value
Appearance		Cloudy, straw
Viscosity @ 25°C, Brookfield RVT @100 rpm	centipoise	4000
Thixotropic index	Ratio	4.5
Specific Gravity @ 25° C		1.307
Geltime at 25°C using 2% Norox KP9 catalyst	minutes	8
Stability in the dark @ 20°C	months	3

Storage

Crystic Flowcoat 402PA 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 Flowcoat 402PA is supplied in 25kg and 225kg containers.

Health and Safety

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

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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.

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