

CRYSTIC[®] Gelcoat 92PA

Water and Chemical Resistant Spray Gelcoat

Introduction

Crystic Gelcoat 92PA is a pre-accelerated isophthalic/neopentyl glycol gelcoat. It has been formulated for spray application, but a brush version, Crystic Gelcoat 69PA is available (see Technical leaflet No. 169 Crystic Gelcoat 92PA is available in a restricted range of colours and the information contained in this leaflet also applies to these pigmented versions.

Applications

Crystic Gelcoat 92PA is recommended for use in sanitary ware and for chemical process plant fabrications.

Features and Benefits

Crystic Gelcoat 92PA has excellent resistance to hot and cold water. It also has good resistance to a wide variety of chemicals including acid and alkaline solutions.

Approvals

Crystic Gelcoat 92PA is approved by Lloyd's Register of Shipping for use in the construction of craft under their survey.

Formulation

Crystic Gelcoat 92PA 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. The recommended catalyst is Norox[®] KP9, which should be added at 2% into the gelcoat. For low-taint applications, the catalyst should be Norox[®] MEKP-925 H, also added at 2%. (Please consult our Technical Service Department if other catalysts are to be used).

Pot Life

The temperature, and the amount of Catalyst M affect the geltime, and hence the pot life of Crystic Gelcoat 92PA. Table 1 shows this relationship.

Table 1: Geltimes using 2% Norox KP9 catalyst in Crystic Gelcoat 92PA.

Temperature	Geltime (minutes)
15°C	9
20°C	7
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. 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.

Spray Application

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.

Additives

Crystic Gelcoat 92PA is supplied in a restricted range of colours. This eliminates the potential for mixing errors with small quantities of pigment paste. The addition of fillers or pigments can adversely affect the weather, water and chemical resistance of the cured gelcoat.

Typical Properties

The following tables give typical properties of Crystic Gelcoat 92PA when tested in accordance with BS2782.

Table 2: Typical Properties of Crystic Gelcoat 92PA liquid Gelcoat.

Property	Units	Nominal Value
Appearance		Hazy Pink
Viscosity @ 25°C		Thixotropic
Specific Gravity @ 25°C		1.1
Volatile content	%	46
Stability in the dark @ 20°C	months	3
Gel time @ 25°C using 2% Norox KP9catalyst	minutes	6

Table 3: Typical Properties of Crystic Gelcoat 92PA fully cured* gelcoat (unfilled casting).

Property	Units	Nominal Value
Barcol Hardness (Model GYZJ 934-1)		47
Water Absorption 24 hrs @ 23°C	mg	16.4
Deflection Temperature under load† (1.80 MPa)	°C	94
Elongation at Break	%	1.6
Tensile Strength	MPa	54.5
Tensile Modulus	MPa	3745

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

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

Post Curing

Satisfactory laminates for many applications can be made with Crystic Gelcoat 92PA 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. For low taint applications the moulding should be allowed to cure for 24 hours at 20°C, and then be oven cured for 3 hours at 85°C. This should be followed by wet-steam cleaning for 1 hour, or by filling with water at 80°C for 2 hours. The water should contain a perfume-free detergent and several lots of clean water should be used for rinsing.



Storage

Crystic Gelcoat 92PA 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 92PA is supplied in 25kg and 225kg containers.

Health and Safety

Please see separate Material Safety Data Sheet.

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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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