CRYSTIC® GELCOAT 69PA

Water and Chemical Resistant Iso - NPG Brush Gelcoat

Introduction
Crystic Gelcoat 69PA is a pre-accelerated Iso - NPG gelcoat. It has been formulated for brush application, but a spray version, Crystic Gelcoat 92PA, is available. Crystic Gelcoat 69PA is available in a wide range of colours and the information contained in this technical data sheet also applies to pigmented versions.

Applications
Crystic Gelcoat 69PA is recommended for use in sanitary ware and for chemical process plant fabrications.

Features and Benefits
Crystic Gelcoat 69PA 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 69PA is approved by Lloyd's Register of Shipping for use in the construction of craft under their survey. With Crystic 392, it is approved by Wine Laboratories Ltd. for the storage of high alcohol content potable spirits and wines.

Formulation
Crystic Gelcoat 69PA should be allowed to attain workshop temperature (18ºC-20ºC) 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 69PA requires only the addition of a catalyst to start the curing reaction. The recommended catalyst is Butanox M50 (or other equivalent catalyst) which should be added at 2% into the gelcoat. For low-taint applications, the catalyst should be Catalyst O (or Curox M100) also 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 Using 2% Butanox M50
15ºC	15
20ºC	11
25ºC	9

The gelcoat, mould and workshop should all be at, or above, 15ºC before curing is carried out.

Application
For normal moulding, the application of Crystic Gelcoat 69PA should be controlled to 0.4-0.5mm (0.015-0.020 inch) wet film thickness. As a guide, approximately 450-600g/m² of gelcoat mixture (depending on pigment) will give the required thickness when evenly applied.

Recommended Testing
It is recommended that customers test all pigmented gelcoats before use under their own conditions of application to ensure the required surface finish is achieved.

Additives
Crystic Gelcoat 69PA 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.

Physical Data - Uncured
The following tables give typical properties of Crystic Gelcoat 69PA when tested in accordance with SB, BS EN, or BS EN ISO test methods.

Property	Unit	Liquid Gelcoat
Appearance		Mauvish, Cloudy
Viscosity at 25ºC		Thixotropic
Specific Gravity at 25ºC		1.10
Stability at 20ºC	Months	3
Geltime at 25ºC Using 2% Butanox M50 (or Other Equivalent Catalyst)	Minutes	9

Physical Data - Cured

Property	Unit	Fully Cured *Gelcoat (Unfilled Casting)
Barcol Hardness (Model GYZJ 934-1)		49
Water Absorption 24 hrs at 23ºC	mg	16
Deflection Temperature Under Load† (1.80 MPa)	ºC	96
Elongation at Break	%	1.6
Tensile Strength	MPa	57
Tensile Modulus	MPa	3884

* Curing Schedule - 24hrs at 20ºC, 3hrs at 80ºC.
† Curing Schedule - 24hrs at 20ºC, 5hrs at 80ºC, 3hrs at 120ºC.

Post-Curing
Satisfactory laminates for many applications can be made with Crystic 69PA by curing at workshop temperature (20ºC). However, for optimum chemical resistant properties, laminates must be post-cured before being put into service. The moulding should be allowed to cure for 24 hours at 20ºC, and then be oven-cured for 24 hours at 80ºC. For low-taint applications, the moulding should be allowed to cure for 24 hours at 20ºC, and then be oven-cured for 3 hours at 85ºC. This should be followed by wet-steam cleaning for 1 hour. If the moulding is of a suitable shape, it can be filled with hot water for 2 hours instead of steam cleaning. The water should be at 80ºC and contain a perfume-free detergent. Several batches of clean water should be used for rinsing.

Storage
Crystic Gelcoat 69PA should be stored in its original containers and out of direct sunlight. It is recommended that the storage temperature should be less than 20ºC where practical, but should not exceed 30ºC. Ideally, containers should only be opened immediately prior to use.

Packaging
Crystic Gelcoat 69PA is supplied in 25Kg and 225Kg containers.

Health and Safety
Please see separate Material Safety Data Sheet.

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