

# CRYSTIC CORE BP 721CC 25

## High Performance Low Density Core Bonding Paste

### Introduction

Crystic Core Bonding Paste 721CC 25 is a low density, gap-filling core adhesive for use in sandwich construction in non-critical areas. Crystic Core Bonding Paste 721CC 25 has been formulated to bond core materials such as rigid PVC foam and balsa to cured or semi-cured FRP skins. Using Crystic Core Bonding Paste 721CC 25 gives a significantly tougher and more durable structural bond than a polyester resin/glass structure or polyester bonding adhesive. In addition, Crystic Core Bonding Paste 721CC 25 provides significant weight savings, reduced styrene emissions and greatly improved cosmetics with the elimination of core print through.

### Characteristics Using 2% Butanox M50 Catalyst

Characteristics	Typical Value	Unit
Working Time/Geltime <sup>1</sup>	25	Minutes
Flash Point	32	°C
Colour Change (Over Cure)	Green to Yellow	-

1. Geltime measured with 100g mass of adhesive at 25°C.

### Physical Data – Uncured

Property	Typical Value	Unit
Viscosity <sup>2</sup>	250,000 – 320,000	cP
Specific Gravity	0.55 – 0.65	-
Volatile Content	45 – 50	%
Mix Ratio <sup>3</sup>	50:1	w/v
Colour/Appearance	Green Paste	-
Stability at 20°C <sup>4</sup>	3	Months

2. Measured using Brookfield Viscometer at 25°C.
3. Mix ratio based on weight/volume (1196PA/M50) for hand mixing. For machine mixing use 92:1 by volume.
4. Stability defined from date of dispatch when left un-opened in the original containers and out of direct sunlight.

### Core Preparation

Priming the core material is essential. It ensures complete wetting of the core material and in the case of balsa, it also effectively seals the grain against potential cracking in the event of minor gelcoat or laminate damage. To prime the core, a light coat of catalysed resin should be evenly sprayed or rolled onto the core surface. The primer resin does not need to be cured before the core can be pushed onto the Crystic Core Bonding Paste 721CC 25. Crystic polyester resins such as 2.406PA, 414PA and 489PA can be used as the primer resin, although it is recommended that test panels of desired constructions are made to confirm performance.

### Application

Crystic Core Bonding Paste 721CC 25 is supplied pre-accelerated. The required hardener is Butanox M50 (or other equivalent MEKP catalyst). The catalyst is added at 2% w/v. Crystic Core Bonding Paste 721CC 25 can be applied with a spatula or from a dispensing unit capable of achieving a volumetric ratio of 92:1 taking care to keep air entrapment to a minimum. Care needs to be taken on the pressure settings to ensure that the microspheres are not crushed, which adversely affects the viscosity of the material. Application should always be carried out at temperatures above 15°C. The recommended temperature range is between 18 and 25°C.

After application, a saw cut toothed comb should be used to meter the adhesive into peaks. A comb with a 4-5mm edge will meter sufficient adhesive for most applications. Crystic Core Bonding Paste 721CC 25 is designed to allow full penetration of the core with a simple consolidation roller used to remove air from laminates. Penetration can be further ensured by the use of a vacuum bag; typical pressures of 0.04 – 0.07 MPa (6-10lb/square inch) are sufficient to ensure good contact.

### Coverage

Coverage is variable depending on the laminate contour uniformity and core material thickness. For 10mm thick square cut foam, an adhesive thickness of about 1.5mm should give adequate bond thickness and cut penetration. For 20mm thick core material, 2.5mm adhesive thickness may be necessary.

Adhesive Thickness	Coverage/m <sup>2</sup>
1.5mm	1.5 litres (0.9kg)
2.5mm	2.5 litres (1.5kg)

### Approvals

Crystic Core Bonding Paste 721CC 25 has Lloyd's Statement of Acceptance for marine craft built under their survey.

### Storage

Crystic Core Bonding Paste 721CC 25 should be stored in its original container and out of direct sunlight. It is recommended that the storage temperature should be between 15 and 20°C. Ideally, containers should be opened only immediately prior to use. Products should never be frozen.

### Packaging

Crystic Core Bonding Paste 721CC 25 is supplied in 15Kg containers.

### Health and Safety

See separate Material Safety Data Sheet.

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