Crystic® ScottBond 119PA White

Lightweight Bonding Paste

Introduction
Crystic ScottBond 119PA is a low density, pre-accelerated isophthalic polyester core bonding paste. It is a nonsagging compound, designed for bonding rigid PVC foam and balsa cores in making sandwich laminates.

Features and Benefits

- Highly thixotropic
- No sagging on vertical surfaces
- Low specific gravity
- Weight saving
- Good handling
- Ease of application

Physical Data – Uncured

Property	Unit	Liquid Bonding Paste
Appearance		White paste
Slump at 25ºC		0
Stability at 25ºC 1	Months	3
Specific Gravity		0.75
Geltime/Working Time* at 25ºC2	Minutes	35

1. Stability defined from date of dispatch when left un-opened in the original containers and out of direct sunlight.
2. Geltime measured with 100g mass of adhesive and 2% Norox KP9.
*1% Norox KP9 (or equivalent catalyst)

Physical Data – Cured

Property	Unit	Fully Cured†	Test Method
Appearance		White	
Lap shear strength (GRP-GRP; laminates abraded and solvent washed)	MPa	9 (laminate failure)	ASTM D1002
Z-direction strength (GRP-GRP; laminates abraded and solvent washed)	MPa	10 (laminate failure)	ASTM C51
Z-direction strength, GRP-XLPVC foam	MPa	2.7 (foam failure)	ASTM C51
Cleavage strength	kg/m	9800	ASTM D1062

† = Cure schedule 24hr @ 25^{o}C followed by 16hr @ 40^{o}C.

Substrates
Crystic ScottBond 119PA can be used on surfaces other than GRP such as timber, balsa, closed cell foam and plasterboard. However, it is recommended that trials are carried out to ensure that adequate bond strength is obtained.

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 ScottBond 119PA. Crystic polyester resins such as 2-406PA, VE679PA 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 ScottBond 119PA is supplied pre-accelerated. The required hardener is Norox KP9 (or other equivalent MEKP catalyst). The catalyst is added at 2% w/v. Crystic ScottBond 119PA 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 ScottBond 119PA is designed to allow full penetration of the core when applied using 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^2
1.5mm	1.5 litres (1.1 kg)
2.5mm	2.5 litres (1.9kg)

Approvals
Crystic ScottBond 119PA is based on a resin that has Lloyd's Statement of Acceptance for marine craft built under their survey.

Storage

Crystic ScottBond 119PA 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 ScottBond 119PA is supplied in 15kg containers.

Health and Safety

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.

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