

CRYSTIC BP 621CC 45

High Performance Bonding Paste

Product Overview

Crystic BP 621CC 45 is pre-accelerated urethane acrylate / isophthalic polyester high performance bonding paste. It is a non-sagging, filled compound, specifically designed for the assembly and bonding of GRP mouldings. Such applications include panels, inserts, internal frames, ribs, internal core materials, composite constructions and car body components. Crystic BP 621CC 45 provides high shear-strength bonded joints without the need for mechanical fixings.

Features and Benefits

Urethane acrylate base	Excellent adhesion and good elongation at break
Low shrink system	No print through with excellent surface finish
Highly thixotropic	No sagging on vertical surfaces
Colour change system	Visual check for effective catalyst mix

Characteristics Using 2% Catalyst M (or Butanox M50)

Characteristics	Typical Value
Working Time/Geltime ¹	22 – 28 Minutes*
Gap Filling	1 – 25 mm
Flash Point	32°C
Colour Change (Over Cure)	Blue/Green to Grey

- Geltime measured with 100g mass of bonding paste at 25°C.
* Working time for a continuous bead 1cm thick is about 45 minutes.

Liquid Properties

Property	Typical Value
Viscosity at 25°C ²	120,000 – 200,000 cP
Specific Gravity	1.25
Mix Ratio ³ (by Weight/Volume)	50:1
Appearance	Blue/Green Paste
Stability at 20°C ⁴	3 Months

- Measured using Brookfield Viscometer at 25°C.
- Mix ratio based on weight/volume (BP 621CC 45/M50) for hand mixing.
- Stability defined from date of dispatch when left un-opened in the original containers and out of direct sunlight.

Typical Material Properties

Property	Typical Value	Test Method
Hardness	80 Shore D	BS EN ISO 868
Max. Tensile Strength	25 MPa	BS EN ISO 527-2
Tensile Modulus	3000 MPa	BS EN ISO 527-2
Elongation at Break	3.3%	BS EN ISO 527-2
GRP Lap-Shear Strength	9.8 MPa	BS ISO 4587

Approvals

Crystic BP 621CC 45 has gained grade 2 DNV Approval (Type Approval Programme 1-501.11).

Surface Preparation

The surfaces to be bonded should be clean, dry and free from any contamination. It may be necessary to mechanically abrade the surfaces to be bonded in order to obtain the bond strength required. Each surface should be coated with the catalysed bonding paste and held together until the adhesive has hardened.

Please contact Scott Bader Technical Services for information on other substrates and advice.

Substrates

Crystic BP 621CC 45 can be used on surfaces other than GRP such as timber and plasterboard. However, it is recommended that trials are carried out to ensure that adequate bond strength is obtained.

Application

Crystic BP 621CC 45 is supplied pre-accelerated, requiring only the addition of catalyst to start the curing reaction. The recommended catalyst is Catalyst M (or Butanox M50 or other equivalent MEKP catalyst), which should be added at 1% to 2% w/v into the bonding paste. The catalyst should be thoroughly incorporated into the material with a low shear mechanical stirrer where possible, taking care to keep air entrapment to a minimum. Alternatively the bonding paste can be applied with a dispensing unit. The bonding paste, moulding and workshop should all be at, or above, 15°C before curing is carried out. Recommended temperature range for application is between 18°C and 25°C. The use of additional pigments or fillers is not recommended as they can affect the performance of the adhesive.

For industrial/commercial use only. The user must determine the suitability of a selected adhesive for a given substrate and application. Contact your local Scott Bader representative for questions or assistance with the selection of adhesives for your use. This product is intended for use by skilled individuals at their own risk. Recommendations contained herein are based on information we believe to be reliable. The properties and strength values obtained under controlled conditions at the Scott Bader laboratory.

Coverage

As a rough guide, 3.8Kg of bonding paste will cover one square metre to a depth of approximately 3mm.

Storage

Crystic BP 621CC 45 should be stored out of direct sunlight in its original container. It is recommended that the storage temperature should be between 15°C and 20°C. Containers should be opened only immediately prior to use. Product should never be frozen.

Packaging

Crystic BP 621CC 45 is supplied in 25Kg and 225Kg containers.

Health and Safety

Please see separate Material Safety Data Sheets.

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