

# CRYSTIC 90-81PA

## Bonding Paste

### Introduction

Crystic 90-81PA is pre-accelerated polyester bonding paste. It is a viscous, light weight compound containing hollow microspheres and a flexible additive, specifically designed for the assembly and bonding of GRP mouldings. Such applications include panels, internal frames, ribs, internal core materials, composite constructions and car body components when weight saving is an essential factor.

The bond strength of Crystic 90-81PA will decrease at service temperatures greater than 60°C. Structures carrying loads above this temperature should either have additional mechanical fastening, such as bolts or rivets, or be bonded with a more suitable adhesive.

Crystic 90-81PA does not give a good, permanent bond to metal surfaces unless some mechanical interlocking, such as a metal mesh, is used. The bonding pastes can be used on surfaces other than GRP e.g. timber, plasterboard, etc. However, it is recommended that trials are carried out to ensure that an adequate bond strength is obtained.

### FORMULATION

Crystic 90-81PA should be allowed to attain workshop temperature (18°C - 20°C) before use. Crystic 90-81PA requires only the addition of catalyst to start the curing reaction. The recommended catalyst is Catalyst M (or Butanox M50), which should be added at 1 to 2 % into the bonding paste. (Please consult our Technical Service Department if other catalysts are to be used). The catalyst should be thoroughly incorporated into the material with a low shear mechanical stirrer where possible.

### Features and Benefits

Highly thixotropic	No drainage on vertical surface
Low specific gravity	Saves weight
Colour change system	For thorough catalyst mixing
Flexible additive	Better resistance to impact

### POT LIFE

Catalyst level (MEKP at 50%)	Pot life in minutes at 25°C
1%	18
2%	8

The bonding paste, moulding and workshop should all be at, or above, 15°C before curing is carried out.

### APPLICATION

The surfaces to be bonded should be clean, dry and free from any contamination. It may be necessary to 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 paste has hardened.

## Coverage

As a rough guide, 2.1 kg of bonding paste will cover one square metre to a depth of approximately 3mm.

## Additives

Crystic 90-81PA is supplied ready to use. The addition of pigments or other materials can adversely affect the degree of cure and bond strength obtained.

## Typical Properties

The following table gives typical properties of Crystic 90-81PA when tested in accordance with appropriate BS or BS EN ISO test methods.

Property		Liquid Bonding Paste
Appearance		Bluish paste
Viscosity at 25°C		Highly thixotropic
Stability in the dark at 20°C	months	3
Geltime at 25°C using 1% Catalyst M (or Butanox M50)	minutes	18
		<b>Fully Cured (unfilled casting)</b>
Appearance		Whitish
Elongation at Break	%	1.2
Single Lap Shear Strength	MPa	7.3

## Post Curing

Satisfactory bonds for most applications can be obtained by curing Crystic 90-81PA at workshop temperature (20°C).

## Storage

Crystic 90-81PA 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 they are kept in a horizontal position to avoid the possible ingress of water.

## Packaging

Crystic 90-81PA is supplied in 18 kg kegs.

## Health and Safety

Please see separate Material Safety Data Sheets

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