

# CRYSTIC PROTEC (B)

## Superior weathering brush Iso - NPG gelcoat

### Introduction

Crystic Protec (B) is high performance Iso - NPG gelcoat specifically designed to give a long lasting, high performance finish capable of withstanding the most testing of external environments. It has superb gloss and colour retention with very low water pick-up - particularly suitable for marine, land transport and prestigious building applications.

Crystic Protec (B) is pre-accelerated and formulated for brush application. It is available in a restricted range of colours and the information in this data sheet also applies to those pigmented versions.

### Approvals

Crystic Protec (B) is approved by Lloyd's Register of Shipping for use in the construction of craft under their survey.

### Formulation

Crystic Protec (B) should be allowed to attain workshop temperature (18°C-25°C) before use. Stir well by hand, or with a low shear mixer to avoid aeration, and then allow to stand to regain thixotropy. Crystic Protec (B) requires only the addition of catalyst to start the curing reaction. The recommended catalyst is Butanox M50 (or other equivalent catalyst), which should be added at 2%. (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.

### Application

For normal moulding, the application of Crystic Protec (B) should be controlled to 0.4-0.6mm (0.015-0.020 inch) wet film thickness. As a guide, approximately 450-600 g/m<sup>2</sup> of Crystic Protec (B) (depending on pigment) will give the required thickness when evenly applied. Under normal moulding conditions with 2% Butanox M50, Crystic Protec (B) should have a back-up time in the region of 1½ to 2 hours.

### Additives

Crystic Protec (B) is supplied in a restricted range of colours. This eliminates the potential for mixing errors with smaller quantities of pigment paste. The addition of fillers or pigments can adversely affect the water and weather resistance of the cured Crystic Protec (B).

### 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.

### Post Curing

Satisfactory laminates for many applications can be made with Crystic Protec (B) by curing at workshop temperature (20°C). However, for optimum properties, including gloss retention and weathering, laminates should be post-cured before being put into service. The moulding should be allowed to cure for 24 hours at 20°C, and then be oven-cured for 3 hours at 80°C.

## Typical Properties

The following tables give typical properties of Crystic Protec (B) when tested in accordance with BS2782.

Property		Liquid Resin Brush grade
Appearance		Mauvish, cloudy
Viscosity		thixotropic
Specific Gravity at 25°C		1.1
Volatile Content	%	32
Geltime at 25°C 2% Butanox M50 (or equivalent catalyst)	minutes	9
Stability at 20°C	months	3

Property		Fully cured* (unfilled casting)
Barcol Hardness (Model GYZJ 934-1)		38
Water Absorption 24hrs at 23°C	mg	9
Deflection Temperature under Load † (1.80 MPa)	°C	63
Elongation at Break	%	3.5
Tensile Strength	MPa	61
Tensile Modulus	MPa	3500

\* Curing schedule - 24 hrs at 20°C, 3 hrs at 80°C

† Curing schedule - 24 hrs at 20°C, 5 hrs at 80°C, 3 hrs at 120°C

## Storage

Crystic Protec (B) should be stored in its original container out of direct sunlight. 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.

## Packaging

Crystic Protec (B) Brush Grade is supplied in 25kg and 225kg containers.

## Health and Safety

See separate Material Safety Data Sheet.