

CRYSTIC GELCOAT 48PA

Fire Retardant Brush Gelcoat

Introduction

Crystic Gelcoat 48PA is a pre-accelerated, filled gelcoat. It has been formulated for brush application, but a spray version, Crystic Gelcoat 93PA, is available. Crystic Gelcoat 48PA available in a restricted range of colours. The information contained in this leaflet also applies to pigmented versions.

Applications

Crystic Gelcoat 48PA can be used externally for building applications, vehicle bodies and general industrial work.

Features and Benefits

Crystic Gelcoat 48PA has good weathering properties, and very low flammability.

Approvals

Properly manufactured, fully cured laminates using Crystic Gelcoat 48PA and Crystic 356PA can achieve a Class 1 rating to BS476 Part 7. This combination can also satisfy the requirements of the Building Regulations 1976 (Section E15) for a Class O structure. With the laminating resin Crystic 1355PA, a Class 2 rating can be achieved to BS476 Part 7.

Formulation

Crystic Gelcoat 48PA should be allowed to attain workshop temperature (18°C - 20°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 Gelcoat 48PA 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 % into the gelcoat. (Please consult our Technical Service Department if other catalysts are to be used). The catalyst should be thoroughly incorporated into the gelcoat, with a low shear mechanical stirrer where possible.

Pot Life

Temperature	Pot Life in minutes
15°C	24
20°C	16
25°C	10

The gelcoat, mould and workshop should all be at, or above, 15°C before curing is carried out.

Application

For normal moulding, the application of Crystic Gelcoat 48PA should be controlled to 0.4 - 0.5mm (0.015 - 0.020 inch) wet film thickness. As a guide, approximately 550-750g/m² of gelcoat mixture (depending on pigment) will give the required thickness when evenly applied.

Additives

Crystic Gelcoat 48PA is supplied in a restricted range of colours. This eliminates the potential for mixing errors with small quantities of pigment paste. The addition of fillers or pigments can adversely affect the weather and water resistance of the cured gelcoat.

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.

Typical Properties

The following tables give typical properties of Crystic Gelcoat 48PA when tested in accordance with SB, BS, EN or BS, EN, ISO test methods.

Property		Liquid Gelcoat
Appearance		Translucent
Viscosity @ 25°C		thixotropic
Specific Gravity @ 25°C		1.4
Acid Value	mg KOH/g	15
Stability @ 20°C	months	3
Geltime @ 25°C using 2% Butanox M50 (or other equivalent catalyst)	minutes	10

Property		Fully cured* Gelcoat (unfilled casting)
Barcol Hardness (Model GYZJ 934-1)		42
Water Absorption 24 hrs @ 23°C	mg	24
Deflection Temperature under load † (1.80 MPa)	°C	62
Elongation at Break	%	2.2
Tensile Strength	MPa	59
Tensile Modulus	MPa	4140

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

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

Post-Curing

Satisfactory laminates for many applications can be made with Crystic Gelcoat 48PA by curing at workshop temperature (20°C). However, for optimum fire retardant properties, laminates must 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.

Storage

Crystic Gelcoat 48PA should be stored in its original container and 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 only be opened immediately prior to use.

Packaging

Crystic Gelcoat 48PA is supplied in 25kg and 225kg containers.

Health and Safety

Please see separate Material Safety Data Sheet.