

CRYSTIC ENVIROTEC LS-96PA

Low Styrene Content Gelcoat for Spray Application

Introduction

Crystic Envirotec LS-96PA is a filled, pre-accelerated gelcoat, formulated for spray application. A restricted range of colours is available, and the information contained in this leaflet also applies to these pigmented versions.

Applications

Crystic Envirotec LS-96PA is recommended for use in land transport and building applications. It is also suitable for general moulding requirements.

Features & Benefits

Crystic Envirotec LS-96PA typically contains 28%-30% styrene when formulated as a pigmented gelcoat. It has good weather resistance and is low in viscosity, with excellent air release properties. Crystic Envirotec LS-96PA achieves good coverage in thin film, and does not drain on the mould.

Crystic Envirotec LS 96PA is less prone to pre-release than most other types of gelcoat, though excessive thickness in deep draw areas should be avoided. It also benefits from lower levels of porosity.

Product Characteristics

Formulation

Crystic Envirotec LS-96PA should be allowed to attain workshop temperature (18°C – 20°C) before use. It should be stirred well using a low shear mixer to avoid aeration, then allowed to stand to regain thixotropy. Crystic Envirotec LS-96PA requires only the addition of a catalyst to start the curing reaction. The recommended catalyst is Catalyst M (or Butanox M50), which should be added at 2% into the gelcoat. Please consult our Technical Service Department if other catalysts are to be used.

Spray Application

Do

- Gently stir the gelcoat before use, by hand or with a low shear mixer.
- Ensure the gelcoat has attained workshop temperature (18°C – 20°C) before use. Temperatures below 18°C will require a higher pressure to achieve an acceptable spray pattern and this will encourage porosity.
- Spray at the minimum practical pressure whilst maintaining an acceptable spray pattern and full fan width.
- Build up thickness in long, even passes until the recommended thickness is achieved.

Don't

- Stir the gelcoat with high shear mixers as this will temporarily break down the thixotropy, leading to drainage.
- Exceed a wet film thickness of 0.625mm (0.025inch), as thick films encourage air retention.
- Apply excessive thickness in corner areas as this can cause pre-release.

Additives

The addition of pigment pastes, or other additives, can adversely affect the spraying characteristics of Crystic Envirotec LS-96PA. To avoid this, it is supplied in a wide range of colours, which eliminates the potential for mixing errors. The inclusion of additives can also adversely affect the weather resistance of the cured gelcoat.

Post Curing

Satisfactory laminates for many applications can be made with Crystic Envirotec LS-96PA by curing at workshop temperature (20°C). However, for optimum 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.

Typical Properties

The following tables give typical properties of Crystic Envirotec LS-96PA when tested in accordance with SB, BS, BS EN or BS EN ISO test methods.

Property		Liquid Gelcoat
Appearance		Bit free, Coloured
Viscosity @ 25°	poise	thixotropic
Specific gravity @ 25°C		1.2
Stability in the dark @ 20°C	months	3
Geltime @ 25°C using 2% Catalyst M (Butanox M50)	minutes	7

Property		Fully Cured*Gelcoat (unfilled casting)
Barcol hardness (Model GYZJ 934 -1)		45
Deflection temperature under Load † (1.80 MPa)	°C	70
Water absorption 24 hours @ 23°C	mg	16
Tensile strength	MPa	59
Tensile modulus	MPa	5000
Elongation at break @ 20°C	%	2.1

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

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

Storage

Crystic Envirotec LS-96PA should be stored in the dark in suitable, closed containers. It is recommended that the storage temperature 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 Envirotec LS-96PA is supplied in 25kg and 225kg containers.

Health & Safety

Please see separate Material Safety Data Sheet.

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Scott Bader Company Limited
Wollaston, Wellingborough,
Northamptonshire NN29 7RL
Telephone: +44 (0) 1933 663100
Facsimile: +44 (0) 1933 666139
www.scottbader.com



