

# CRYSTIC MICROBAN GELCOAT LS 96PA

## Low Styrene Content Isophthalic Gelcoat for Spray Application

### Introduction

Crystic Microban Gelcoat LS 96PA is a filled, pre-accelerated gelcoat, formulated for spray application with built-in antibacterial protection to provide protection against common bacteria, mould and mildew in composite parts manufactured using this product. Crystic Microban LS 96PA is available in a wide range of colours and the information contained in this technical datasheet also applies to these pigmented versions.

### Applications

Crystic Microban LS 96PA is recommended for use in land transport and building applications where antibacterial protection is required. It is also suitable for general moulding requirements.

### Features & Benefits

Crystic Microban 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 Microban LS 96PA achieves good coverage in thin film, and does not drain on the mould.

Crystic Microban 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 Microban 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 Microban LS 96PA requires only the addition of a 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.

### 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 Microban 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.

## 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 Microban 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 Microban 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 at 25°	poise	thixotropic
Specific Gravity at 25°C		1.2
Stability at 20°C	months	3
Geltime at 25°C using 2% Butanox M50 (or other equivalent catalyst)	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 at 23°C	mg	16
Tensile Strength	MPa	59
Tensile Modulus	MPa	5000
Elongation at Break at 20°C	%	2.1

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

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

## Storage

Crystic Microban LS 96PA should be stored in its original container and out of direct sunlight. 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 Microban LS 96PA is supplied in 25kg and 225kg containers.

## Health & Safety

Please see separate Material Safety Data Sheet.