



Crystic® 991PA

Sanitaryware Acrylic back up resin

Technical Data Sheet

Introduction

Crystic® 991PA is a pre-accelerated, thixotropic, unsaturated polyester resin designed to be applied by spray or hand layup.

Crystic® 991PA is recommended for use as an acrylic back up resin used for the manufacturing of bathtubs, vanities & shower trays. The resin has low reactivity and very low exotherm during curing and has been designed for higher filler loading. White pigmented resin can be made by dispersing Titanium dioxide in Crystic® 991PA.

An alternative grade Crystic 990PA is available for ABS back up applications if required.

Formulation

Crystic® 991PA should be allowed to attain workshop temperature (15 - 35°C) before use. Crystic® 991PA requires only the addition of catalyst to start the curing reaction. The recommended catalyst is Butanox M-50 (or other equivalent catalyst) which should be added at 1.5% - 2.0% by weight into the resin with a low shear mechanical stirrer where possible.

(Please consult our Technical Service Department if other catalysts are to be used).

Formulation	Typical Backup Mix
50%	Crystic® 991PA
45%	Calcium Carbonate
5%	Titanium Dioxide

Physical data - liquid resin

The following tables give typical properties of Crystic® 991PA when tested in accordance with BS2782 test methods.

Property	Unit	Value
Viscosity at 25°C SP2 rpm 12	mPa.s	700 - 900
Cone and Plate viscosity at 25°C	mPa.s	0.9 – 1.2
Geltime at 25°C using 2% Butanox M-50	minutes	15
Stability from the date of manufacture when stored in accordance with storage recommendations	months	6



Physical data - cured

The following tables give typical properties of an unfilled casting of fully cured Crystic® 991PA when tested in accordance with BS2782 test methods.

Property	Unit	Value
Barcol hardness		43
Deflection temperature under load [†] (1.80 MPa)	°C	60
Elongation at break	%	1.8
Tensile strength	MPa	51
Tensile modulus	MPa	3,000

*Curing Schedule - 24 hours at 20°C, 3 hours at 80°C.

†Curing Schedule - 24 hours at 20°C, 5 hours at 80°C, 3 hours at 120°C.

Post Curing

Satisfactory laminates for many applications can be made with Crystic® 991PA by curing at workshop temperature (25°C). However, for optimum chemical, water and heat resistant properties, laminates should be post cured before being put into service. Parts should be allowed to cure for 24 hours at 25°C and then be oven cured for 3 hours at 80°C or 16 hours at 40°C.

Packaging and storage

Crystic® 991PA is supplied in 25kg, 225kg and bulk containers.

Crystic® 991PA should be stored in its original container, under cover, and out of direct sunlight. These must be kept closed and airtight. It is recommended that the storage temperature should be less than 25°C and the product should not be frozen. Storing the product outside of these conditions may affect the properties of the product and reduce its shelf life. Ideally, containers should be opened only immediately prior to use. Material should be used within 6 months from date of production

Health and Safety

Please see separate Material Safety Data Sheet.

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