

# CrysticROOF

## STANDARD RESIN



### INTRODUCTION

CrysticROOF Resin is a low styrene emission, pre-accelerated, orthophthalic polyester resin, which rapidly wets out reinforcements. It has been specifically designed for roofing applications.

### PRODUCT CHARACTERISTICS

CrysticROOF Resin should be stirred well by hand, or with a low shear mixer to avoid aeration, and then allowed to stand to regain thixotropy. CrysticROOF Resin requires only the addition of catalyst to start the curing reaction. The recommended catalyst is Catalyst M (or Butanox M50), which should be added at 1% into the resin. The catalyst should be thoroughly incorporated into the resin with a low shear mechanical stirrer where possible.

### APPLICATIONS

CrysticROOF Resin is designed for hand laminating and would normally be used with chopped strand mat.

### ADDITIVES

The addition of filler or pigments can adversely affect the hardening of the resin. Users should evaluate the effect of any potential additives before use.

### POT LIFE

Temperature	Pot Life in minutes with 1% Catalyst M
15°C	42
20°C	22
25°C	17

Ideally the resin and ambient temperature should be at, or above, 15 °C before curing is carried out. Lower temperatures will lengthen the cure time considerably. The level of catalyst can be increased to 2% to assist the cure at reduced temperatures. The environmental conditions should be dry and with no imminent rain forecast. The substrate should also be dry before application begins in order to ensure a good bond.

### TYPICAL PROPERTIES - LIQUID RESIN

The following tables give the minimum expected properties of CrysticROOF Resin when tested in accordance with BS 2782.

Property	Unit	Typical Values
Appearance		Greenish Blue
Viscosity at 25°C		Thixotropic
Specific Gravity at 25°C		1.12
Volatile Content	%	43
Stability in the dark at 20°C	Months	5
Geltime at 25°C using 1% Catalyst M (or Butanox M50)	Minutes	17

## STORAGE AND SHELF LIFE

CrysticROOF Standard Resin should be stored between 5°C and 25°C in the original, unopened container in a dry, well ventilated place. Protect from freezing and direct sunlight. Avoid contact with oxidising agents. If stored outside of these recommendations, shelf life will be significantly reduced.

Stability from date of manufacture when stored in accordance with storage recommendations is 5 months.

## PACKAGING

CrysticROOF® Standard Resin is supplied in 20kg containers.

## HEALTH AND SAFETY

Please see separate Material Safety Data Sheet.

## TYPICAL PROPERTIES - FULLY CURED RESIN

Property	Unit	Typical Values*
Barcol Hardness (Model GYZJ 934-1)		42
Deflection Temperature under load † (1.80 MPa)	°C	67
Water Absorption 24 hours at 23°C	Mg	15
Tensile Strength	MPa	50
Tensile Modulus	Mpa	3800
Elongation at Break	%	1.5

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

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

## TYPICAL PROPERTIES - CSM LAMINATE

Property	Unit	Typical Values**
Tensile Strength	MPa	98
Tensile Modulus	MPa	7600
Flexural Strength	MPa	190
Flexural Modulus	MPa	7400
Elongation at Break	%	1.7

\*\*Made with 4 layers 450g/m<sup>2</sup> PB CSM

Curing Schedule - 24 hrs @ 20°C, 16hrs @ 40°C.



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