SCOTT BADER

Compounds & Structural resins

CRYSTIC PD9359

Fire retardant unsaturated polyester resin

Introduction
Crystic PD9359 is a non accelerated, filled, fire retardant polyester resin which has been designed for contact moulding applications. It has been formulated as a cost effective resin and wets out the reinforcement rapidly. Crystic PD9359 is supplied non accelerated to be suitable for hot climate regions.

Approvals
Crystic PD9359 can achieve a Class 1 rating to BS476 part 7:1987

Formulation
Crystic PD9359 should be allowed to attain workshop temperature (18ºC - 20ºC) before use. Stir well by hand, or with a low shear mixer to avoid aeration, and then allow to stand to regain thixotropy. Crystic PD9359 requires the addition of a catalyst and an accelerator to start the curing reaction. The recommended catalyst is Catalyst M (or Butanox M50 or equivalent), which should be added at 1.5 % into the resin. The recommended accelerator is Accelerator G which is a cobalt octoate at 1% active cobalt. The accelerator, then the catalyst should be thoroughly incorporated into the resin, with a low shear mechanical stirrer where possible.
N.B. Catalyst and accelerator must not be mixed directly together since they can react with explosive violence.

The resin, mould and workshop should all be at, or above, 15ºC before curing is carried out.

Additives
The addition of any pigment or other additives may affect the properties of the resin**.**

Typical Properties
The following tables give typical properties of Crystic PD9359 when tested in accordance with BS2782

Property		**Liquid Resin**
Appearance		Whitish
Viscosity Bohlin C & P, at 25ºC 37.35 sec^{-1}	dPa.s	3.7 – 4.4
Viscosity Cone and Plate, 0-5 P, 25°C	dPa.s	1.9 – 2.2
Specific Gravity at 25ºC		1.4
Volatile Content	%	30
Stability at recommended storage conditions from date of dispatch	months	3
Geltime at 25ºC using 1.5% Catalyst M (Butanox M50) + 2 ml Acc. G	minutes	15 - 22

Property		**Fully cured* Resin (unfilled casting)**
Barcol Hardness (GYZJ 934-1)		57
Deflection Temperature under load † (1.80 MPa)	ºC	80
Water Absorption 24hrs at 23ºC	mg	14
Tensile Strength	MPa	50
Tensile Modulus	MPa	6400
Elongation at Break	%	1.1

*Curing schedule - 24hrs at 20ºC, 3hrs at 80ºC
†Curing schedule - 24hrs at 20ºC, 5hrs at 80ºC, 3hrs at 120ºC

Property		CSM ** Laminate
Glass Content	%	28.6
Tensile Strength	MPa	82
Tensile Modulus	MPa	6900
Elongation at Break	%	1.6
Flexural Strength	MPa	151
Flexural Modulus	MPa	6000

**Made with 4 layers 450g/m^2 CSM.
Curing schedule 24 hrs at 20°C, 16hrs at 40°C

Storage
Crystic PD9359 should be stored in the dark, in suitable closed containers. It is recommended that the storage temperature should be less than 25ºC. Storing the resin above 25°C will modify the properties and will shorten the shelflife. Ideally, containers should be opened only immediately prior to use. it is recommended that drums are kept in a horizontal position to avoid the possible ingress of water.

Packaging
Crystic PD9359 is supplied in 25kg and 200kg containers.

Health and Safety
Please see separate Material Safety Data Sheet.

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