Crystic PD9359

Introduction
Crystic PD9359 is a filled, fire retardant polyester resin which has been designed for contact moulding applications. It has been formulated as an inexpensive resin and wets out the reinforcement rapidly.

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

Product Characteristics

Formulation
Crystic PD9359 should be allowed to attain workshop temperature (18 °C – 20 °C) 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 only the addition of catalyst to start the curing reaction. The recommended catalyst is Butanox M50 (or equivalent), which should be added at 1.5 % into the resin. The catalyst should be thoroughly incorporated into the resin, with a low shear mechanical stirrer where possible.

Pot Life

Temperature	2% Accelerator G[1] +1.5% Butanox M50 (or equivalent)
20 °C	19 minutes

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

Additives
Since the addition of certain pigments, fillers or extra styrene may adversely affect the properties of Crystic PD9359, users are urged to seek the advice of our Technical Services Department before making such additions.

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

Property		**Liquid Resin**
Appearance		White to pinkish
Viscosity @ 25 °C 37.35 sec^{-1}	Poise	4.0
Viscosity @ 25 °C 4500 sec^{-1}	Poise	2.0
Specific gravity @ 25 °C		1.4
Volatile content	%	30
Stability in the dark @ 20 °C	Months	3
Geltime @ 20 °C using 2 % Accelerator G[1] + 1.5 % Butanox M50 (or equivalent)	Minutes	19

Property		**Fully Cured* Resin**
Barcol hardness (GYZJ 934-1)		57
Deflection temperature under load† (1.80 MPa)	°C	80
Water absorption 24 hrs @ 23 °C	mg	14
Tensile strength	MPa	50

Tensile modulus	MPa	6400
Elongation at break	%	1.1

*Curing schedule – 24 hrs @ 20 °C, 3 hrs @ 80 °C
†Curing schedule – 24 hrs @ 20 °C, 5 hrs @ 80 °C, 3 hrs at 120 °C

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 450 gm^{-2} CSM
Curing schedule 24 hrs @ 20 °C, 16 hrs @ 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 20 °C where practical, but should not exceed 30 °C. Ideally containers should be opened only immediately prior to use. Where they have to be stored outside, it is recommended that they are kept in a horizontal position to avoid the possible ingress of water.

Packaging
Crystic PD9359 is supplied in 25 kg and 225 kg containers.

Health and Safety
Please see separate Material Safety Data Sheet.

[1]Accelerator G is a 1 % solution of cobalt in styrene

May 2012