



Synthetic Polymers

CRYSTIC PDME 062 PA – Clear

Acrylic back up Resin

Introduction

CRYSTIC PDME 062 PA – Clear is a preaccelerated, thixotropic unsaturated polyester resin used as a base resin for back up of acrylic sheets.

Applications

CRYSTIC PDME 062 PA - Clear was developed as an acrylic back up resin used for manufacturing bath tubs. The resin has medium reactivity and good temperature resistance. White pigmented resin can be made by dispersing Titanium dioxide in CRYSTIC PDME 062 PA – Clear.

Formulation

CRYSTIC PDME 062 PA – Clear requires only the addition of catalyst to start the curing reaction as it is supplied as an accelerated product. Prior to use, CRYSTIC PDME 062 PA – Clear should be allowed to attain workshop temperature and the correct amount of catalyst needs to be thoroughly dispersed into the resin. A recommended catalyst for the curing system is Butanox M-50 at an addition level of 2%, by weight.

Pot life

Table 1 presents gel time data for 100g of CRYSTIC PDME 062 PA - Clear catalysed with 2% of Butanox M-50 at different temperatures.

Table 1

Gel Time @ 20°C	Minutes	17
Gel Time @ 25°C	Minutes	13
Gel Time @ 30°C	Minutes	10

The gel time data presented above is indicative only as the actual gel time of the product on the mould may be influenced by several factors, including the material from which the mould is made. Ideally, the resin and the workshop should be at, or above, 20°C before curing is carried out.

Typical Properties

The following tables give typical properties of liquid CRYSTIC PDME 062 PA – Clear when tested in accordance with BS2782.

Table 2. Liquid properties.

Property	Unit	Value
Appearance		Pinkish , Cloudy
Viscosity @ 25°C SP3 rpm 60	cps	450 – 550
Viscosity @ 25 °C SP3 rpm 6	cps	1200 - 1800
Styrene Content	%	40 - 44
Acid Value	mgKOH/g	<20
Stability in the dark @ 20°C	months	3
Geltime @ 25°C using 2% Catalyst M (Butanox M50)	minutes	13

The following table gives typical physical properties of an unfilled casting of fully cured CRYSTIC PDME 062 PA - Clear when tested in accordance with BS2782.

Table 3. Physical properties of Crystic CRYSTIC PDME 062 PA - Clear , fully cured unfilled castings.

Property	Unit	Value
Barcol hardness (Model GYZJ 934 –1) *		37
Deflection temperature under Load † (1.80 MPa)	°C	75
Tensile strength *	MPa	75
Tensile modulus *	MPa	3400
Elongation at break *	%	3.5

* The curing schedule was 24 hrs @ 20°C, followed by 3 hrs @ 80°C

† The curing Schedule was 24 hrs @ 20°C, followed by 5 hrs @ 80°C, then 3 hrs @ 120°C

Storage

CRYSTIC PDME 062 PA – Clear should be stored under cover in the dark in the containers in which they are supplied. It is recommended that the storage temperature should be maintained at 25°C where practical, but should not exceed 30°C. Ideally, containers should be opened only immediately prior to use.

Packaging

CRYSTIC PDME 062 PA - Clear is supplied in 20kg or 225kg steel containers. For transportation purposes, CRYSTIC PDME 062 PA – Clear is Class 3.0 in the IMCO code and UN No 1866; ADR No 31(c). Packing Group 3; Tremcard No 30G35.

Health & Safety

Please see separate Materials Safety Data Sheet.



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