CRYSTIC® VE 679PA

DCPD Modified Vinyl Ester Resin for Skin Coats

Introduction
Crystic VE 679PA is a pre-accelerated, DCPD modified, vinyl ester resin designed for use as a skin coat in marine, tooling and swimming pool applications. Crystic VE 679PA has excellent blister resistance and significantly reduces the occurrence of print through, to produce durable mouldings with an enhanced surface finish. Crystic VE 679PA is recommended for hand lamination processing.

Product Characteristics

Formulation
Crystic VE 679PA should be allowed to attain workshop temperature (18°C - 25°C) before use. It requires only the addition of a catalyst to start the curing reaction. The recommended catalyst is MEKP (50%), which should be added at 1.5% - 2% into the resin. The catalyst should be thoroughly incorporated into the resin, using 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.

Additives
Crystic VE 679PA may be pigmented by the addition of up to 5% of Crystic Pigment Paste. The addition of certain pigments, fillers or extra styrene may adversely affect the food taint, toxicity, and chemical resistant properties of laminates so, for critical applications, customers should satisfy themselves that any additions made will give the performance required.

Typical Properties
The following table gives typical properties of Crystic VE 679PA when tested in accordance with BS 2782.

Typical Liquid Resin Properties	Unit	Crystic VE 679PA
Appearance	-	Red / brown
Viscosity, Brookfiled SP3 at 60RPM, 25°C	mPas	300 - 450
Geltime, 1.5% Butanox M50, 25°C	minutes	20 - 30
Volatile Content	%	43 - 46
Stability from date of manufacture when stored in accordance with storage recommendations	months	6

Typical Cast Resin Properties*	Unit	Crystic VE 679PA
Barcol Hardness	-	35
Deflection Temperature under load (1.80 MPa) †	ºC	94
Water absorption 24hrs @ 23°C	mg	15
Tensile Modulus	GPa	3.0
Tensile Stress	MPa	52
Tensile Elongation at break	%	2.1
Specific Gravity @ 25°C	gcm^{-3}	1.16

* Curing Schedule – 24 hrs at 20°C + 3 hrs at 80°C
† Curing Schedule – 24 hrs at 20°C + 5 hrs at 80°C + 3 hrs at 120°C

Post Curing
Satisfactory laminates for many applications can be made from Crystic VE 679PA by curing at workshop temperature (20°C). For optimum properties and long-term performance, however, laminates should be post cured before being put into service. The laminate should be allowed to cure for 24 hours at 20°C, and then be oven cured for 3 hours at 80°C, or 16 hours at 40°C.

Storage
Crystic VE 679PA 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.

Packaging
Crystic VE 679PA is supplied in 25kg, 200kg and 1000kg containers.

Health and Safety
Please see separate Material Safety Data Sheets

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