

CRYSTIC[®] VE 679PA

DCPD - Modified Vinyl Ester Resin for Skin Coats

Introduction

Crystic VE 679PA is a pre-accelerated, thixotropic, DCPD modified, vinyl ester resin.

Applications

Crystic VE 679PA was developed for use as a skin coat in marine and tooling applications.

Features and Benefits

Crystic VE 679PA has excellent blister resistance and significantly reduces the occurrence of print through, to produce durable mouldings with an enhanced surface finish.

Approvals

Crystic VE 679PA is approved by Lloyd's Register of Shipping for use in the construction of craft under their survey.

Formulation

Crystic VE 679PA must be thoroughly stirred and allowed to attain workshop temperature (18°C - 20°C) before use. It needs only the addition of a catalyst to start the curing reaction. Either Butanox LPT or Butanox M50 catalyst can be used, which should be added at 2% into the resin. The geltime of Crystic VE 679PA can be approximately determined from the table below.

Pot Life

Temperature	Pot Life in Minutes	Pot Life in Minutes
	Using 2% Butanox LPT	Using 2% Butanox M50
15°C	50	50
20°C	28	34
25°C	18	23

Additives

The addition of pigment, fillers or other additives may adversely affect the resin properties. Users should consult Scott Bader's Technical Service Department before making any such additions.

Typical Properties

The following tables give typical properties of Crystic VE 679PA when tested in accordance with the appropriate BS or BS EN ISO test method.

Property		Liquid Resin
Appearance		Red / Brown
Viscosity at 25°C 37.35sec ⁻¹	Poise	3.5
Viscosity at 25°C 4500sec ⁻¹	Poise	2.3
Specific Gravity at 25°C	gcm ⁻³	1.065
Stability at 25°C	months	6
Geltime at 25°C using 2% Butanox LPT	minutes	18
Geltime at 25°C using 2% Butanox M50	minutes	23

Property		Fully Cured Resin (unfilled casting)	
		*Cure	**Cure
Barcol Hardness (GYZJ 934 - 1)		23	35
Deflection Temperature under load† (1.80 MPa)	°C	60	94
Water Absorption 24hrs at 23°C	mg	10	15
Tensile Strength	MPa	60	52
Tensile Modulus	GPa	2.7	3.0
Elongation at Break	%	4.3	2.1
Specific Gravity at 25°C	gcm ⁻³	1.161	1.158

* Curing Schedule - 24hrs at 20°C, 16hrs at 40°C

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

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

Storage

Crystic VE 679PA 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.

Packaging

Crystic VE 679PA is supplied in 25kg and 200kg steel containers.

Health and Safety

Please see separate Materials Safety Data Sheet.

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