

# **Crystic<sup>®</sup> VE 679PA**

## **DCPD - Modified Vinyl Ester Resin for Skin Coats**

### **INTRODUCTION**

Crystic<sup>®</sup> VE679PA is a pre-accelerated, thixotropic, DCPD modified, vinyl ester resin.

### **APPLICATIONS**

Crystic<sup>®</sup> VE679PA was developed for use as a skin coat in marine and tooling applications.

### **FEATURES & BENEFITS**

Crystic<sup>®</sup> VE679PA has excellent blister resistance and significantly reduces the occurrence of print through, to produce durable mouldings with an enhanced surface finish.

### **APPROVALS**

Crystic<sup>®</sup> VE679PA is approved by Lloyd's Register of Shipping for use in the construction of craft under their survey.

### **FORMULATION**

Crystic<sup>®</sup> VE679PA 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 Norox<sup>®</sup> MEKP-925 H catalyst or Andonox<sup>®</sup> KP9 catalyst can be used. This should be added at 2% into the resin. The geltime of Crystic<sup>®</sup> VE679PA can be approximately determined from the table below.

***N.B. Peroxide catalysts are highly reactive and may decompose with explosive violence, or cause fires, if they come into contact with flammable materials, metals or accelerators. For this reason they must never be stored in metal containers or be mixed directly with accelerators.***

## POT LIFE

| Temperature | Pot Life in Minutes Using<br>2% Norox <sup>®</sup> MEKP-925 H<br>Catalyst | Pot Life in Minutes Using 2%<br>Andonox <sup>®</sup> KP9 Catalyst |
|-------------|---|---|
| 15°C        | 50 mins   | 50 mins   |
| 20°C        | 28 mins   | 34 mins   |
| 25°C        | 18 mins   | 23 mins   |

## Additives

Adding 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<sup>®</sup> VE679PA 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 <sup>-1</sup>                           | Poise             | 3.5          |
| Viscosity at 25°C 4500sec <sup>-1</sup>                            | Poise             | 2.3          |
| Specific Gravity @ 25°C  | gcm <sup>-3</sup> | 1.065        |
| Stability in the dark at 25°C                                      | months            | 3            |
| Geltime at 25°C using 2% Norox <sup>®</sup><br>MEKP-925 H Catalyst | minutes           | 18           |
| Geltime at 25°C using 2% Andonox <sup>®</sup><br>KP9 Catalyst      | Minutes           | 23           |

| Property  |                   | Fully Cured Resin<br>(unfilled casting) |       |
|---|-------------------|---|-------|
|   |                   | *                                       | **    |
| Barcol Hardness (GYZJ 934 - 1)                  |                   | 23                                      | 35    |
| Deflection Temperature under load<br>(1.80 MPa) | °C                | 60                                      | 94 †  |
| Water Absorption 24hrs @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 @ 25°C                         | gcm <sup>-3</sup> | 1.161                                   | 1.158 |

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

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

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

## STORAGE

Crystic<sup>®</sup> VE679PA 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<sup>®</sup> VE679PA is supplied in 25kg and 200kg steel containers.

## HEALTH & SAFETY

Please see the applicable Material Safety Data Sheets, depending on the curing system used.

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*Before you use this information, kindly verify that this data sheet is the latest version.*

*All information is given in good faith but without warranty. We cannot accept responsibility or liability for any damage, loss or patent infringement resulting from the use of this information.*



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