CRYSTIC® GELCOAT 33PA

Flexible Isophthalic Brush Gelcoat With Good Impact Resistance

Introduction
Crystic Gelcoat 33PA is a pre-accelerated, brush isophthalic gelcoat available in a wide range of colours. The information contained in this leaflet also applies to pigmented versions.

Applications
Crystic Gelcoat 33PA is suitable for any marine, building or transport application where good flexibility and impact resistance is needed.

Features and Benefits
Crystic Gelcoat 33PA is resilient and flexible with good water and impact resistance.

Approvals
Crystic Gelcoat 33PA is approved by Lloyd's Register of Shipping for use in the construction of craft under their survey.

Formulation
Crystic Gelcoat 33PA should be allowed to attain workshop temperature (18ºC - 20ºC) before use. Stir well by hand, or with a low shear mixer to avoid aeration, and then allow to stand to regain thixotropy. Crystic Gelcoat 33PA requires only the addition of catalyst to start the curing reaction. The recommended catalyst is Butanox M50 (or other equivalent catalyst), which should be added at 2% into the gelcoat. (Please consult our Technical Service Department if other catalysts are to be used). The catalyst should be thoroughly incorporated into the gelcoat, with a low shear mechanical stirrer where possible.

Pot Life

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Pot Life in Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>15ºC</td>
<td>28</td>
</tr>
<tr>
<td>20ºC</td>
<td>17</td>
</tr>
<tr>
<td>25ºC</td>
<td>10</td>
</tr>
</tbody>
</table>

The gelcoat, mould and workshop should all be at, or above, 15ºC before curing is carried out.

Application
The application of Crystic Gelcoat 32PA should be controlled at 0.5-0.6mm wet film thickness. As a guide, approximately 500-750g/m² of gelcoat mixture (depending on pigment) will give the required thickness when evenly applied.

Additives
Crystic Gelcoat 32PA is supplied in a full range of colours. This eliminates the potential for mixing errors with small quantities of pigment paste. The addition of fillers or pigments can adversely affect the performance of the cured gelcoat.

Recommended Testing
It is recommended that customers test all pigmented gelcoats before use under their own conditions of application to ensure the required surface finish is achieved.
Physical Data - Uncured

The following tables give typical properties of Crystic Gelcoat 33PA when tested in accordance with appropriate SB, BS, EN or BS, EN, ISO test methods.

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Liquid Gelcoat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Mauvish, cloudy</td>
<td></td>
</tr>
<tr>
<td>Viscosity at 25°C</td>
<td>Thixotropic</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity at 25°C</td>
<td>1.15</td>
<td></td>
</tr>
<tr>
<td>Acid Value mgKOH/g</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Stability at 20°C</td>
<td>Months</td>
<td>3</td>
</tr>
<tr>
<td>Geltime at 25ºC Using 2% Butanox M50 (or Other Equivalent Catalyst)</td>
<td>Minutes</td>
<td>10</td>
</tr>
</tbody>
</table>

Physical Data - Cured

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Fully Cured &quot;Gelcoat (Unfilled Casting)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barcol Hardness (Model GYZJ 934-1)</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>Water Absorption 24 hrs at 23ºC</td>
<td>mg</td>
<td>26</td>
</tr>
<tr>
<td>Deflection Temperature Under Load† (1.80 MPa)</td>
<td>ºC</td>
<td>55</td>
</tr>
<tr>
<td>Elongation at Break %</td>
<td></td>
<td>4.9</td>
</tr>
<tr>
<td>Tensile Strength MPa</td>
<td></td>
<td>66</td>
</tr>
<tr>
<td>Tensile Modulus MPa</td>
<td></td>
<td>3260</td>
</tr>
</tbody>
</table>

* Curing Schedule - 24hrs at 20ºC, 3hrs at 80ºC.
† Curing Schedule - 24hrs at 20ºC, 5hrs at 80ºC, 3hrs at 120ºC.

Post-Curing

Satisfactory mouldings for many applications can be made with Crystic Gelcoat 33PA by curing at workshop temperature (20ºC). However, for optimum properties, mouldings must be post-cured before being put into service. The moulding should be allowed to cure for 24 hours at 20ºC, and then be oven-cured for 3 hours at 80ºC.

Storage

Crystic Gelcoat 33PA should be stored in its original container and out of direct sunlight. It is recommended that the storage temperature should be less than 20ºC where practical, but should not exceed 30ºC. Ideally, containers should only be opened immediately prior to use.

Packaging

Crystic Gelcoat 33PA is supplied in 25Kg and 225Kg containers.

Health and Safety

Please see separate Material Safety Data Sheet.

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SCOTT BADER COMPANY LIMITED

Wollaston, Wellingborough, Northamptonshire, NN29 7RL
Telephone: +44 (0) 1933 663100
Facsimile: +44 (0) 1933 666623
www.scottbader.com