Aditya Birla Chemicals (Thailand) Ltd. (Epoxy Division)

EPOTEC YD 128 / THW 4504

**Description**

Epotec YD 128 is an unmodified liquid epoxy resin with medium viscosity based on bisphenol-A and epichlorohydrin.

Epotec THW 4504 is modified amine based curing agent available about 60% solids in water. It offers capability to formulate V.O.C. free systems for confined areas as well as coatings and toppings for damp surfaces including green concrete. Epotec THW 4504 possesses excellent water vapour permeability. The ability of Epotec THW 4504 to cure in thick section enables it to be formulated into high strength grouts, wear resistant concrete toppings and in ECC.

Epotec YD 128 / Epotec THW 4504 are designed especially for use in construction application such as flooring.

**Applications**

- Self leveling floors
- Trowelable floors and floor toppings
- Grouts
- ECC

**Typical properties**

<table>
<thead>
<tr>
<th></th>
<th>Epotec YD 128</th>
<th>Epotec THW 4504</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Visual</td>
<td>Visual</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>ASTM D 1544-04</td>
<td>ASTM D 1544-04</td>
</tr>
<tr>
<td></td>
<td>0.2 G.</td>
<td>6.0 G.</td>
</tr>
<tr>
<td><strong>Epoxy Equivalent weight</strong></td>
<td>ASTM D 1652-04</td>
<td>DIN 16945</td>
</tr>
<tr>
<td></td>
<td>187 g/eq</td>
<td>215 mgKOH/g</td>
</tr>
<tr>
<td><strong>Viscosity @25°C</strong></td>
<td>ASTM D 2196-05</td>
<td>ASTM D 2196-05</td>
</tr>
<tr>
<td></td>
<td>12,600 cP</td>
<td>2,000 cP</td>
</tr>
</tbody>
</table>

* = Typical properties are indicated for information only
Typical properties*

**Epotec YD 128 / Epotec THW 4504**

<table>
<thead>
<tr>
<th>Resin : Hardener mixing ratio</th>
<th>pbw</th>
<th>100:110</th>
</tr>
</thead>
</table>

**Pot life (150g mix)**

| TEC-AS-P-111 | 60 min   |

Thin film set time 25 °C

| 4 hr |

* = Typical properties are indicated for information only

**=Epotec THW 4504:Epotec YD128: water 60g:54g:36g

Guideline formulation

Self leveling flooring

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>RM</th>
<th>Qty. pbw</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Epotec THW 4504</td>
<td>33</td>
</tr>
<tr>
<td>2.</td>
<td>BYK 380N²</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td>BYK 012²</td>
<td>1.12</td>
</tr>
<tr>
<td></td>
<td>BYK 037²</td>
<td>1.12</td>
</tr>
<tr>
<td>3.</td>
<td>TiO₂ Rutile</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>CaCO₃</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>Silica flour M-10³</td>
<td>57</td>
</tr>
<tr>
<td>4.</td>
<td>Water</td>
<td>41</td>
</tr>
<tr>
<td>5.</td>
<td>Epotec YD 128</td>
<td>30</td>
</tr>
</tbody>
</table>

1 = Aditya Birla Chemicals, Thailand
2 = BYK Chemie, Germany
3 = Sibalco, Belgium

Application Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Test method</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixing ratio (resin:curing agent)</td>
<td>-</td>
<td>weight</td>
<td>100 : 110</td>
</tr>
<tr>
<td>Pigment : Binder ratio</td>
<td>-</td>
<td>weight</td>
<td>2.45 : 1</td>
</tr>
<tr>
<td>PVC</td>
<td>-</td>
<td>%</td>
<td>50</td>
</tr>
<tr>
<td>Solid content</td>
<td>-</td>
<td>wt%</td>
<td>38</td>
</tr>
<tr>
<td>Density</td>
<td>ASTM D1475</td>
<td>g/cc</td>
<td>1.597</td>
</tr>
<tr>
<td>Pot life @ 25°C</td>
<td>-</td>
<td>minutes</td>
<td>60</td>
</tr>
<tr>
<td>Surface Appearance</td>
<td>-</td>
<td>-</td>
<td>Smooth, egg shell finish</td>
</tr>
<tr>
<td>Property</td>
<td>Method</td>
<td>Value</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>--------------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>Hardness (Shore D)</td>
<td>ASTM D2240</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>- 1 day</td>
<td></td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>- 7 days</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abrasion resistance (weight loss)</td>
<td>ASTM D4060</td>
<td>100.6</td>
<td></td>
</tr>
<tr>
<td>(CS17, 500 g load, 1000 cycles)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Vapour Transmission</td>
<td>ASTM D1653-93</td>
<td>2.04E-03</td>
<td></td>
</tr>
</tbody>
</table>

**Packing**

Epotec YD 128 and Epotec THW 4504 are packed and delivered in 200 lit drums, as a standard pack. Other packs are available on request.

**Storage**

Epotec YD 128 and Epotec THW 4504 should be stored in original tightly closed container, in dry and warm conditions. Under these conditions, it has a storage life of at least one year from the date of manufacturing. In case of crystallization of Epotec YD 128 the product can be restored to its original condition by warming to 55-60°C while stirring. **It is advised not to allow the product to freeze.**

**Handling**

Please refer to the MSDS of the individual products for more instructions on safe storage and handling of Epotec YD 128 and Epotec THW 4504.

**Disclaimer**

All recommendations for use of our products whether given by us in writing, verbally or to be implied from the results of tests carried out by us are based on the current state of our knowledge. Although, the information contained in this sheet is accurate, no liability can be accepted in respect of such information. We warrant only that our product will meet the designated specifications and make no other warranty either express or implied, including any warranty of merchantability or fitness for a particular purpose as the conditions of application are beyond our control.

**For Additional Information, Please Contact:**

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