| ••••                 | Aditya Birla Chemicals (Thailand) Ltd. (Epoxy Division)                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                |                                             |  |  |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------------------------------|--|--|
| • epotec             | EPOTEC YD 012HE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |                                             |  |  |
| Description          | Epotec YD 012HE is a medium molecular weight solid epoxy resin designed<br>especially for use in high flow powder coatings. The relatively low viscosity of this<br>resin in this category combined with good colour makes it ideal for use in powder<br>coatings requiring reduced orange peel, smooth finish and high gloss. The narrow<br>EEW range and optimum EEW value of epotec YD 012HE ensures consistent<br>powder coating quality with good physical stability at relatively wider range of<br>ambient conditions. |                |                                             |  |  |
| Applications         | <ul><li>Hybrid powder coatings</li><li>High gloss, good flow pure epoxy powder coatings</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                             |                |                                             |  |  |
| Specification        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |                                             |  |  |
|                      | Appearance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Visual         | Clear, colourless to light<br>yellow flakes |  |  |
|                      | Colour*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ASTM D 1544-04 | 0.5 G max.                                  |  |  |
|                      | Epoxy Equivalent weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ASTM D 1652-04 | 750 – 800 g/eq                              |  |  |
|                      | Viscosity <sup>#</sup> @150°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ASTM D 4287-00 | 2,200 – 3,500 cP                            |  |  |
|                      | Softening point                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ASTM D 6090-99 | 85 – 98 °C                                  |  |  |
|                      | Hydrolysable Chlorine                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ASTM D 1726-03 | 0.1 % max.                                  |  |  |
|                      | * 40 % solids in Butyl Carbitol<br># Cone & Plate viscometer                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                |                                             |  |  |
| Typical properties * |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |                                             |  |  |
|                      | Epoxide Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ASTM D 1652-04 | 1.25 – 1.33                                 |  |  |
|                      | Water content                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ASTM E 203-01  | 0.5 % max.                                  |  |  |
|                      | Glass transition<br>Temperature (T <sub>g</sub> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | DIN 11357      | 50 °C min                                   |  |  |
|                      | Relative Density                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ASTM D 1298    | 1.16 - 1.18 g/cc                            |  |  |
|                      | Bulk density                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ASTM D 1895    | 0.50 - 0.65 MT/m <sup>3</sup>               |  |  |
|                      | Insolubles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | TEC-AS-P-050   | 30 ppm max.                                 |  |  |

\* = Typical properties are indicated for information only

| <b>General information</b> | : Good flow, Glossy White Powder Coating |
|----------------------------|------------------------------------------|
|----------------------------|------------------------------------------|

|          | RM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Qty                                                                                                                                 |  |  |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--|--|
|          | Epotec YD 012<br>DICY<br>2PI<br>Benzoin<br>Modaflow 6000<br>TiO <sub>2</sub> R 902<br>Blanc fixe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 60<br>2.5<br>0.01<br>0.4<br>0.7<br>30<br>6.39                                                                                       |  |  |
|          | Properties                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Value                                                                                                                               |  |  |
|          | Film thickness<br>Gloss at 60°<br>PCI flow rating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 60 μ<br>> 93 GU<br>8                                                                                                                |  |  |
| Packing  | standard pack.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Epotec YD 012HE is packed and delivered in PE bags, 25 kg nett per bag as a standard pack.<br>Other packs are available on request. |  |  |
| Storage  | Epotec YD 012HE resin should be stored in normal ambient conditions preferably<br>below 35 °C, in closed container, at dry and cool place. Epotec YD 012HE resin<br>should not be exposed to moisture, sunlight or other heating media to avoid<br>agglomeration. Under proper storage conditions, it has a storage life of at least<br>two years from the date of manufacturing. It is advised to take proper<br>precaution while emptying bags of epotec YD 012HE to avoid discharge of<br>static electricity that might be present on the packing material surface. A<br>good exhaust to avoid formation of a cloud of fines at discharge area is<br>recommended. |                                                                                                                                     |  |  |
| Handling | Please refer to the MSDS of the product for more instructions on safe storage and handling of epotec YD 012HE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                     |  |  |

## 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.

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