Technical Data Sheet

1. Description
Ecoworld 003 is the trademark for our biodegradable and compostable PBAT. Ecoworld PBAT is typically used in compounds with starch and PLA (polylactic acid) to produce films.

2. Technology
Ecoworld PBAT is produced by using the patented standing five reactor system which makes it possible to control the melt flow index below 5 without application of chain extending agents.

3. Certification
Ecoworld PBAT can be in direct contact with food safely. The material complies with USA FDA certification. It also conforms the standards of biodegradability and compostability, e.g. standards EN13432 and ASTM6400.

4. Properties

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>UNIT</th>
<th>TEST REFERENCE</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melt Flow Rate</td>
<td>g/10min</td>
<td>DIN ISO 1133 at T=190°C, w=2.16kg</td>
<td>≤5</td>
</tr>
<tr>
<td>Density</td>
<td>g/cm³</td>
<td>ISO 1183</td>
<td>1.26</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>MPa</td>
<td></td>
<td>≥18</td>
</tr>
<tr>
<td>Melting Temperature</td>
<td>°C</td>
<td>DSC</td>
<td>110-120</td>
</tr>
<tr>
<td>Elongation At Break</td>
<td>%</td>
<td></td>
<td>≥500</td>
</tr>
<tr>
<td>Vicat Softening Point</td>
<td>°C</td>
<td></td>
<td>92</td>
</tr>
</tbody>
</table>

5. Application
Ecoworld 003 has been developed for the conversion to flexible films using a blown film process (with starch or PLA in a compound recipe). Typical applications is the production of packaging films, single use bags, shopping bags, carrier bags and compost bags. Ecoworld 003 can be processed excellently on blown film LDPE extrusion lines, sheet film extrusion lines without any special requirements apart from lower extrusion temperature.

6. Packaging
Ecoworld 003 is delivered in 650kg big bag or 25kg bag. Both packages are in PE inliner bags.

7. Processing recommendations
Ecoworld 003 can be processed without predrying with a moisture content ≤ 0.5%.
8. Storage
The raw materials should not be stored longer than 12 months.

9. Quality control, quality assurance
Jinhui ZhaoLong has implemented the ISO9001 quality management system in order to guarantee quality.

10. Agent and distributor
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