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|-------|------------|-------------------------------------------|-------------------------------------------------------------------------------------|
| Code  | PRO_TDS_30 | PRO<br><b>TECHNICAL DATA SHEET</b><br>TDS |  |
| Rev.: | 1          |                                           |                                                                                     |
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| Date: | 03/31/23   |                                           |                                                                                     |

## **SECTION 1: PRODUCT DESCRIPTION**

FC 60000 is a product made with compound of crystallized PLA that presents performance and versatility, being a compostable biopolymer capable of replacing materials of fossil origin in a wide range of applications. Product suitable for injection molding applications.


## **SECTION 2: PHYSICAL PROPERTIES & GUIDELINES FOR USE**

FC 60000 is supplied as off-white pellets. Temperatures during transportation and storage may not exceed 50 °C. Storage time of unopened bags may not surpass 24 months at room temperature. Drying prior to processing is essential. A moisture content less than 100 ppm is recommended to prevent viscosity degradation. The property values listed below should be viewed as guidelines only and may vary based on processing conditions. No warranties of any kind, either expressed or implied are made regarding products described or regarding designs, data or information set forth. Process temperatures must not exceed 230°C. In order to achieve high Heat Deflection Temperatures, hot molding or annealing of the part is required.

Drying: dry the material for 4 – 6 hours at 100°C.

|                        | Setting, °F* | Setting, °C* |
|------------------------|--------------|--------------|
| <b>Feed Throat</b>     | 70           | 21           |
| <b>Feed Section</b>    | 311-347      | 155-175      |
| <b>Zone 1</b>          | 356-428      | 180-220      |
| <b>Zone 2</b>          | 356-428      | 180-220      |
| <b>Zone 3</b>          | 356-428      | 180-220      |
| <b>Zone 4</b>          | 356-428      | 180-220      |
| <b>Hot Runner</b>      | 374-428      | 190-220      |
| <b>Nozzle</b>          | 374-428      | 190-220      |
| <b>Hot Mold Set up</b> | 194-212      | 90-100       |

\*These settings are intended as a starting point. Optimization may be required.

|       |            |                                           |                                                                                     |
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| Physical Properties             | Test Method   | Value                  |
|---------------------------------|---------------|------------------------|
| Melt Flow Rate (190°C, 2.16 kg) | ASTM D1238:20 | 22 – 42 g/10 min       |
| Density                         | ASTM D792:20  | 1.25 g/cm <sup>3</sup> |
| Appearance                      | -             | Off-white              |

| Mechanical Properties*                               | Test Method  | Value      |
|------------------------------------------------------|--------------|------------|
| Tensile Strength                                     | ASTM D638:22 | > 45 MPa   |
| Elongation at break                                  | ASTM D638:22 | < 10%      |
| Notched Izod Impact Strength                         | ASTM D256:10 | < 70 J/m   |
| Heat Deflection Temperature (before crystallization) | ASTM D648:18 | 50 – 55 °C |

\*Data obtained from 30 °C injection molded standard test bars (Type I).

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