Manufacturing Guidance for 3D Printed Nylon Surgical Masks

Build Orientation

- For efficient nesting, place front portion of mask facing down and stack vertically. Place the filter enclosure cover in the vertical orientation scattered throughout the build or build separately if necessary. Depending on the build volume, it may be more efficient to stack similar sizes or to stack varying sizes together. Total build quantity and layout will be vary per machine.

Machine Parameters

- DuraForm ProX PA default 3D systems parameters are recommended for laser power, scan spacing, etc. Use locally established settings for heaters, scale/offset, etc.

<table>
<thead>
<tr>
<th>Parameter Settings</th>
<th>ProX 500/ProX 6100</th>
<th>sPro 60</th>
<th>sPro 140</th>
<th>sPro 230</th>
</tr>
</thead>
<tbody>
<tr>
<td>DuraForm ProX PA Material Blend Ratio</td>
<td>Default – 40% Virgin/60% Recycled</td>
<td>Default – 33.3% sifted part cake, 33.3% virgin, 33.3% sifted overflow</td>
<td>Default – 40% Virgin/60% Recycled</td>
<td>Default – 40% Virgin/60% Recycled</td>
</tr>
</tbody>
</table>

Post Processing

- Break out parts from print cake (ensure print cake temperature ≤ 50°C to prevent warping).
- Brush off bulk powder on parts.
- Blast parts with glass bead media for fine depowdering.
- Rinse parts with water to remove remaining media.
  - If available, use ultrasonic cleaner for an additional cleaning cycle in water.
- Dry parts using compressed air or an oven.
  - Recommended oven parameters: 50°C for 30 minutes.