Manufacturing Guidance for 3D Printed Nylon Surgical Masks

Build Orientation

- For most efficient nesting and good print quality, place front portion of mask facing down and stack vertically.
- We recommend placing the filter enclosure cover in horizontal orientation to ensure consistent scaling. Grouping the filter enclosure covers together in a cage can speed up post-processing by allowing parts to be cleaned together rather than individually.
- You can nest parts as close as 1.5 mm for good and consistent part quality.
- Exemplary nesting of a P396:

![Exemplary nesting of a P396](image)

Individual orientation  Top view  Full job (60 pairs)

- Total build quantity and layout will vary per system type (P1/P3/P7).

Machine Parameters

- Depending on the system you have available, we recommend using

<table>
<thead>
<tr>
<th>Parameter Setting (PPP)</th>
<th>P110 or older</th>
<th>P396 or older</th>
<th>P770 or older</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameter Setting (PPP)</td>
<td>EOS (PA2200_100_xxx)</td>
<td>EOS (PA2200_120_x_Balance)</td>
<td>EOS (PA2200_120_x_Balance)</td>
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<tr>
<td>Material EOS PA2200 blend ratio</td>
<td>50-50 (virgin/recycled)</td>
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</tr>
</tbody>
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With proper powder handling including an MQS, you can also run at a 40-60 ratio (virgin/recycled).
Post Processing

- Break out parts from print cake (ensure print cake temperature ≤ 60°C to prevent warping).
- Remove excess powder from parts.
- Blast parts with glass bead media for further depowdering.
- Rinse parts with water to remove remaining media and dry parts using compressed air.