

### MATERIAL OVERVIEW

FATHOM's CNC machining services, milling and turning, accommodate a wide range of production-grade materials. Tight tolerances, excellent dimensional accuracy, superior finishing—FATHOM offers a bridge-to-production solution that results in high-end rapid prototypes and low-volume production parts.

Focused on accelerating and enhancing the product development process, FATHOM is blending advanced technologies with traditional manufacturing methods to drive greater innovation in ways not previously possible.

### LEAD TIME FOR ALL STANDARD MATERIALS: AS SOON AS NEXT-DAY.

OTHER MATERIALS AVAILABLE UPON REQUEST

METALS	OPTIMAL QUANTITY	TOLERANCES (+/-)	ADVANTAGES & CONSIDERATIONS	FINISH & APPEARANCE
<b>Stainless Steel</b>	1-1000	+/- 0.10mm	<ul style="list-style-type: none"> <li>• High Strength</li> <li>• High Corrosion Resistance</li> <li>• High Weldability</li> </ul>	<ul style="list-style-type: none"> <li>• Standard Machined Finish</li> <li>• Tumbled</li> <li>• Bead Blasted (Sand or Glass)</li> <li>• Polished</li> </ul>
<b>Low Carbon Steel</b>	1-1000	+/- 0.10mm	<ul style="list-style-type: none"> <li>• Common Steel</li> <li>• High Machinability &amp; Weldability</li> <li>• Can be Hardened</li> <li>• Not Corrosion Resistant</li> </ul>	<ul style="list-style-type: none"> <li>• Standard Machined Finish</li> <li>• Tumbled</li> <li>• Bead Blasted (Sand or Glass)</li> <li>• Polished</li> </ul>
<b>Aluminum</b>	1-1000	+/- 0.10mm	<ul style="list-style-type: none"> <li>• High Strength, Low Weight</li> <li>• High Machinability</li> <li>• Low Cost</li> </ul>	<ul style="list-style-type: none"> <li>• Standard Machined Finish</li> <li>• Tumbled</li> <li>• Bead Blasted (Sand or Glass)</li> <li>• Polished</li> </ul>
<b>Brass</b>	1-1000	+/- 0.10mm	<ul style="list-style-type: none"> <li>• Corrosion &amp; Chemical Resistant</li> <li>• High Density &amp; Strength</li> <li>• Non-Conductive</li> </ul>	<ul style="list-style-type: none"> <li>• Standard Machined Finish</li> <li>• Tumbled</li> <li>• Bead Blasted (Sand or Glass)</li> <li>• Polished</li> </ul>

PLASTICS	OPTIMAL QUANTITY	TOLERANCES (+/-)	ADVANTAGES & CONSIDERATIONS	FINISH & APPEARANCE
<b>HDPE</b>	1-100	+/- 0.10mm	<ul style="list-style-type: none"> <li>• Medium Impact Strength</li> <li>• Flexible (Shore D70)</li> <li>• FDA Compliant</li> <li>• No Water Absorbision</li> </ul>	<ul style="list-style-type: none"> <li>• Standard Machined Finish</li> <li>• Tumbled</li> <li>• Flame or Vapor Polished (Acrylic Only)</li> </ul>
<b>PC</b>	1-100	+/- 0.10mm	<ul style="list-style-type: none"> <li>• Medium Tensile &amp; High Impact Strength</li> <li>• Maintains Properties Over Range of Temperatures</li> <li>• High Optical Clarity (Clear)</li> </ul>	<ul style="list-style-type: none"> <li>• Standard Machined Finish</li> <li>• Tumbled</li> <li>• Flame or Vapor Polished (Acrylic Only)</li> </ul>
<b>ABS</b>	1-100	+/- 0.10mm	<ul style="list-style-type: none"> <li>• Medium Tensile &amp; High Impact Strength</li> <li>• Electrical Insulator</li> <li>• High Machinability</li> <li>• Low Cost</li> </ul>	<ul style="list-style-type: none"> <li>• Standard Machined Finish</li> <li>• Tumbled</li> <li>• Flame or Vapor Polished (Acrylic Only)</li> </ul>
<b>Acrylic</b>	1-100	+/- 0.10mm	<ul style="list-style-type: none"> <li>• High Tensile Strength</li> <li>• Can Be Polished for High Optical Clarity</li> </ul>	<ul style="list-style-type: none"> <li>• Standard Machined Finish</li> <li>• Tumbled</li> <li>• Flame or Vapor Polished (Acrylic Only)</li> </ul>
<b>Nylon 6/6</b>	1-100	+/- 0.10mm	<ul style="list-style-type: none"> <li>• High Tensile &amp; Medium Impact Strength</li> <li>• Maintains Properties Over Range of Temperatures</li> </ul>	<ul style="list-style-type: none"> <li>• Standard Machined Finish</li> <li>• Tumbled</li> <li>• Flame or Vapor Polished (Acrylic Only)</li> </ul>
<b>Acetal (Delrin)</b>	1-100	+/- 0.10mm	<ul style="list-style-type: none"> <li>• Medium Tensile &amp; Medium Impact Strength</li> <li>• Holds Machining Tolerances Well</li> <li>• Good Wear &amp; Fatigue Resistance</li> </ul>	<ul style="list-style-type: none"> <li>• Standard Machined Finish</li> <li>• Tumbled</li> <li>• Flame or Vapor Polished (Acrylic Only)</li> </ul>
<b>Ultem</b>	1-100	+/- 0.10mm	<ul style="list-style-type: none"> <li>• High Tensile Strength</li> <li>• High Working Temperature Range (335°F)</li> <li>• Electrical Insulator</li> <li>• High Optical Clarity (Clear)</li> </ul>	<ul style="list-style-type: none"> <li>• Standard Machined Finish</li> <li>• Tumbled</li> <li>• Flame or Vapor Polished (Acrylic Only)</li> </ul>

**Need A Material Not Listed?**

Please Speak With A FATHOM Expert Directly About Additional Material Options