

## Nylon PA6 v PA66

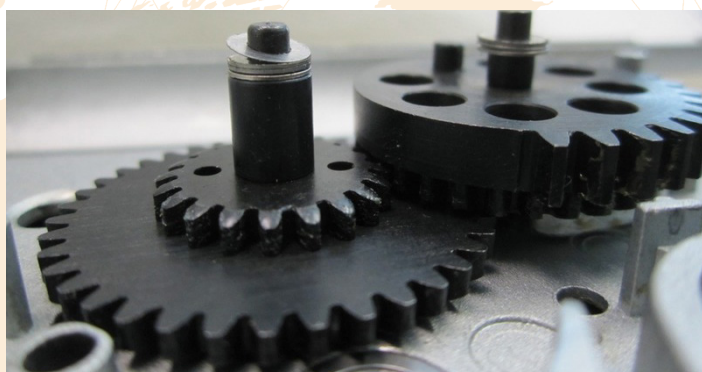
Nylon is a thermoplastic material offering good mechanical properties and wear resistance. Its key characteristics include high mechanical strength, rigidity and stability.

PolyGlobal primarily offers PA6 and PA66 moulded options. Whilst similar in their general properties, they each have slight variances in their specific characteristics.

	PA6	PA66
<b>Heat Resistance</b>	<ul style="list-style-type: none"> <li>✓ Good long term heat aging performance</li> <li>✓ Maintains toughness at low temperature</li> </ul>	<ul style="list-style-type: none"> <li>✓ Higher thermal stability than PA6</li> <li>✓ Increased short term heat resistance</li> </ul>
<b>Surface Finish &amp; Mouldability</b>	<ul style="list-style-type: none"> <li>✓ Easier to colour with better surface finish</li> <li>✓ Lower warpage</li> </ul>	<ul style="list-style-type: none"> <li>✓ More difficult to process &amp; pigment</li> <li>✓ Inconsistent moulded surface finish</li> </ul>
<b>Abrasion &amp; Wear Resistance</b>	<ul style="list-style-type: none"> <li>✓ Higher impact resistance</li> <li>✓ Good characteristics of both PA6 &amp; PA66 generally</li> </ul>	<ul style="list-style-type: none"> <li>✓ Higher abrasion resistance</li> <li>✓ Good characteristics of both PA6 &amp; PA66 generally</li> </ul>
<b>Hydrolysis &amp; Chemical Resistance</b>	<ul style="list-style-type: none"> <li>✓ Better resistance to hydrocarbons</li> <li>✗ Not advised for applications requiring exposure to water</li> </ul>	<ul style="list-style-type: none"> <li>✓ Lower moisture absorption &amp; better hydrolytic stability</li> <li>✓ Generally better chemical resistance</li> </ul>
<b>Rigidity &amp; Stiffness</b>	<ul style="list-style-type: none"> <li>✓ Better damping properties</li> <li>✓ Good dimensional stability</li> </ul>	<ul style="list-style-type: none"> <li>✓ Higher stiffness &amp; mechanical strength</li> <li>✓ Good dimensional stability</li> </ul>

Although availability and cost can fluctuate with both material options, currently PA66 grades are experiencing increased demand pressures and as such PA6 currently offers the most economical option.

## Application Examples



### PA6

- ✓ Casings & covers
- ✓ Bearings & cogs
- ✓ Skate wheels



### PA6,6

- ✓ Automotive parts
- ✓ Friction bearings
- ✓ Bolts & fasteners

**Please use this information for general comparisons only. Final product testing is always recommended.**