



# Ecomass Compounds

<b>Base Resin</b>	<b>NYLON 12</b> (Polyamide 12)
Compound Type	Ecomass Compound 1700 Series - High Density
Processing Method	Injection Molding

## Process Guidelines

Processing Conditions	Material Drying
<ul style="list-style-type: none"> <li>• Melt Temperature Range..... 250 - 260C (475 - 500F)</li> <li>• Mold Temperature Range..... 60 - 85C (135 - 185F)</li> <li>• Injection Pressure..... As required</li> <li>• Pack (Hold) Pressure..... 65 - 80% of IP</li> <li>• Back Pressure..... 3 -7 bar (50 - 100 psi)</li> <li>• Injection Speed..... Medium - Fast</li> <li>• Screw Speed..... 50 - 100 rpm</li> <li>• Fill Time..... 2.5 - 5 cm/s (1.0 - 2.0 in/s)</li> <li>• Pack (Hold) Time<sup>2</sup>..... Max. part weight</li> <li>• Cooling Time..... As required</li> <li>• Cushion..... 6 - 12mm (0.25 - 0.50 in.)</li> </ul>	<ul style="list-style-type: none"> <li>• Dryer Type(s)..... Dehumidifying</li> <li>• Drying Temperature Range... 75 - 80C (165 - 175F)</li> <li>• Typical Drying Time<sup>1</sup>..... 4 - 6 hours</li> <li>• <b>Do Not Exceed</b>..... <b>95C (200F), &gt;3 hrs</b></li> <li>• Dryer Dew Point..... -30 to -40C</li> <li>• Minimum Air Flow..... 0.8 - 1.0 CFM</li> <li>• Properly Functioning..... Dessicant Beds Filters Volatiles Trap</li> </ul>

Molding Machine Requirements	Safety / Purging
<ul style="list-style-type: none"> <li>• Screw L/D..... 20:1 min.</li> <li>• Screw Compression Ratio.... 2.5:1 min.</li> <li>• Feed Throat..... Cooled</li> <li>• Nozzle Type..... Reverse taper</li> <li>• Check Ring Type..... Free flow</li> <li>• Typical Clamp Tonnage..... 2.5 - 4.0 tons/in<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Maintain adequate ventilation.</li> <li>• Wear safety glasses &amp; protective clothing.</li> <li>• Do not mix with other materials.</li> <li>• Avoid excessive residence time in the barrel. <small>(Purge if extended residence time is anticipated)</small></li> <li>• <b>Use extreme caution at melt temp. &gt; 350C</b></li> </ul>
Abrasion Resistant Screw, Barrel & Check Ring	Purge with high viscosity HDPE or high temperature commercial purge compound as recommended.

### Notes

<sup>1</sup> Typical Drying time assumes unopened packaging and utilization of a dehumidifying dryer with a dewpoint of -40° with sufficient air flow.

<sup>2</sup> Pack time can depend on wall thickness and gate design

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