

# MELDIN® HT THERMOPLASTICS MATERIAL COMPARISON

1000 Series PPS	3000 Series PEI	4000 Series PAI	5000 Series PEEK
Excellent chemical and thermal resistance	Excellent mating surface compatibility	Excellent wear resistance under high load	Excellent structural integrity
<b>General</b>	<b>General</b>	<b>General</b>	<b>General</b>
Specific Gravity: 1.39 to 1.57	Specific Gravity: 1.40 to 1.65	Specific Gravity: 1.43 to 1.51	Specific Gravity: 1.30 to 1.51
Continuous use temperature: +200°C (+390°F)	Continuous use temperature: +170°C (340°F)	Continuous use temperature: +290°C (+555°F)	Continuous use temperature: +260°C (+500°F)
Design Flexibility: <b>Excellent</b>	Design Flexibility: <b>Excellent</b>	Design Flexibility: <b>Excellent</b>	Design Flexibility: <b>Excellent</b>
<b>Mechanical</b>	<b>Mechanical</b>	<b>Mechanical</b>	<b>Mechanical</b>
Tensile Strength 85 to 180 MPa (12.3 to 26.1 kpsi)	Tensile Strength 50 to 135 MPa (7.3 to 19.6 kpsi)	Tensile Strength 110 to 220 MPa (16.0 to 31.9 kpsi)	Tensile Strength 90 to 230 MPa (13.1 to 33.4 kpsi)
Elongation 1.0% to 6.5%	Elongation 5.4% to 7.5%	Elongation 1.5% to 4.8%	Elongation 1.2% to 20%
Compressive Strength 90 to 155 MPa (13.1 to 22.5 kpsi)	Compressive Strength n.a.	Compressive Strength 130 to 250 MPa (18.9 to 36.3 kpsi)	Compressive Strength 110 to 240 MPa (16.0 to 34.8 kpsi)
Flexural Strength 65 to 260 MPa (9.4 to 37.7 kpsi)	Flexural Strength 70 to 155 MPa (10.2 to 22.5 kpsi)	Flexural Strength 150 to 350 MPa (21.8 to 50.8 kpsi)	Flexural Strength 125 to 330 MPa (18.1 to 47.9 kpsi)
<b>Available as</b>	<b>Available as</b>	<b>Available as</b>	<b>Available as</b>
Basic Shapes ✓ Finished Parts	Basic Shapes ✓ Finished Parts	Basic Shapes ✓ Finished Parts	✓ Basic Shapes ✓ Finished Parts
<b>Manufacturing Process</b>	<b>Manufacturing Process</b>	<b>Manufacturing Process</b>	<b>Manufacturing Process</b>
Hot Compression Molding ✓ Isostatic Molding ✓ Injection Molding Direct Forming	Hot Compression Molding ✓ Isostatic Molding ✓ Injection Molding Direct Forming	Hot Compression Molding ✓ Isostatic Molding ✓ Injection Molding Direct Forming	✓ Hot Compression Molding Isostatic Molding ✓ Injection Molding Direct Forming

