

# Isoplast® 2540 ETPU

**Type:** Isoplast® 2540 Natural is an engineering thermoplastic polyurethane resin for medical applications

**Features:** USP Class VI<sup>(1)</sup>

Properties	Test Method	Values <sup>(1)</sup>
<b>Physical</b>		
Mould Shrinkage, %	ASTM D 955	0.1-0.3
Water Absorption, 24 hours at 23°C, %	ASTM D 570	-
Specific Gravity, g/cm <sup>3</sup>	ASTM D 792	1.51
<b>Mechanical</b>		
Tensile Strength at Yield, MPa	ASTM D 638	190
Tensile Strength at Break, MPa	ASTM D 638	190
Elongation at Yield, %	ASTM D 638	2
Elongation at Break, %	ASTM D 638	2
Tensile Modulus, MPa	ASTM D 638	12,000
Flexural Strength, MPa	ASTM D 790	310
Flexural Modulus, MPa	ASTM D 790	10,000
Izod Impact Strength 3.2 mm; 23°C, J/m 3.2 mm; -40°C, J/m	ASTM D 256	400 400
Instrumented Dart Impact @ 23°C, J @ -29°C, J	ASTM D 3763	31 17
<b>Thermal</b>		
Heat Deflection Temperature Under Load HDT/B (0.46 MPa) unannealed, °C HDT/B (0.46 MPa) annealed, °C HDT/A (1.8 MPa) unannealed, °C HDT/A (1.8 MPa) annealed, °C	ASTM D 648	- - 100 90
Vicat Temperature, °C	ASTM D 1525	186
Coefficient of Linear Thermal Expansion	ASTM D 696	1.4 K <sup>-1</sup> x 10 <sup>-5</sup>
<b>Processing Information</b>		
Recommended Drying Temperature, °C		80-100
Recommended Melt Temperature <sup>(3)</sup> , °C		240-260
Recommended Mould Temperature, °C		65-90

<sup>(1)</sup> This resin has undergone biocompatibility testing in accordance with US Pharmacopoeia XXII Class VI guidelines

<sup>(2)</sup> Typical Values, not to be construed as specifications. Users should confirm by their own tests.

<sup>(3)</sup> Under no circumstances should glass reinforced resins be heated above 260°C during molding or purging. This might cause decomposition, leaving a glass-enriched melt which cannot be extruded, and therefore, could damage the screw



Lubrizol Advanced Materials, Inc. | 9911 Brecksville Road, Cleveland, Ohio 44141-3247 | Tel: 800.379.5389 or 216.447.5000

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