

Isoplast® 2531 ETPU

Type: Isoplast® 2531 is an engineering thermoplastic polyurethane resin for medical applications

Features: USP Class VI⁽¹⁾

Properties	Test Method	Values ⁽¹⁾
Physical		
Mould Shrinkage, %	ASTM D 955	0.4-0.6
Water Absorption, 24 hours at 23°C, %	ASTM D 570	0.19
Specific Gravity, g/cm ³	ASTM D 792	1.20
Mechanical		
Tensile Strength at Yield, MPa	ASTM D 638	69
Tensile Strength at Break, MPa	ASTM D 638	63
Elongation at Yield, %	ASTM D 638	7
Elongation at Break, %	ASTM D 638	140
Tensile Modulus, MPa	ASTM D 638	2,100
Flexural Strength, MPa	ASTM D 790	97
Flexural Modulus, MPa	ASTM D 790	2,300
Izod Impact Strength 3.2 mm; 23°C, J/m 3.2 mm; -40°C, J/m 6.4 mm, 23°C, J/m	ASTM D 256	128 43 91
Instrumented Dart Impact @ 23°C, J @ -29°C, J	ASTM D 3763	90 90
Rockwell Hardness R Scale M Scale	ASTM D758	123 74
Thermal		
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	88 104 77 99
Vicat Temperature, °C	ASTM D 1525	109
Coefficient of Linear Thermal Expansion	ASTM D 696	6.1 K ⁻¹ x 10 ⁻⁵



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

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained. The information is based on laboratory work with small-scale equipment and does not necessarily indicate end product performance. Because of the variations in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the products for the applications disclosed. Full-scale testing and end product performance are the responsibility of the user. Lubrizol Advanced Materials, Inc. shall not be liable for and the customer assumes all risk and liability of any use or handling of any material beyond Lubrizol Advanced Materials, Inc.'s direct control. The SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Nothing contained herein is to be considered as permission, recommendation, nor as an inducement to practice any patented invention without permission of the patent owner.

Properties	Test Method	Values ⁽¹⁾
Optical		
Gardner 60° Gloss, %	ASTM D 823	-
Light Transmission, %	ASTM D 1003	90
Yellowness Index	ASTM D 1925	6
Processing Information		
Recommended Drying Temperature, °C		95-110
Recommended Melt Temperature, °C		230-250
Recommended Mould Temperature, °C		65-95

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

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



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

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained. The information is based on laboratory work with small-scale equipment and does not necessarily indicate end product performance. Because of the variations in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the products for the applications disclosed. Full-scale testing and end product performance are the responsibility of the user. Lubrizol Advanced Materials, Inc. shall not be liable for and the customer assumes all risk and liability of any use or handling of any material beyond Lubrizol Advanced Materials, Inc.'s direct control. The SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Nothing contained herein is to be considered as permission, recommendation, nor as an inducement to practice any patented invention without permission of the patent owner.