



Lubrizol LifeSciences

# Pellethane® 2363-90AE TPU

**Type:** Pellethane 2363-90AE is a thermoplastic polyurethane elastomer

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

Properties	Test Method	Values <sup>(1)</sup>
<b>Physical</b>		
Specific Gravity	ASTM D 792	1.14
Mould Shrinkage (1.6 mm [1/16"] thick plaques), %		
MD		0.5-0.8
TD		0.5-0.6
<b>Mechanical</b>		
Durometer Hardness, Shore	ASTM D 2240	90A
Tensile Modulus		
50% Elongation, MPa (psi)	ASTM D 412	6.6 (950)
100% Elongation, MPa (psi)		10.2 (1475)
300% Elongation, Mpa (psi)		19.0 (2750)
Ultimate Tensile Strength, MPa (psi)	ASTM D 412	41.3 (6000)
Ultimate Elongation, %	ASTM D 412	550
Elongation Set After Break, %	ASTM D 412	60
Tear Strength, Die "C", KN/m (pli)	ASTM D 624	94.6 (540)
Compression Set		
22 hours at 25°C (77°F), %	ASTM D 395	25
22 hours at 70°C (158°F), %	Method B	40
Taber Abrasion Resistance		
1000g, 1000 cycles; H-22 wheel (coarser), mg	ASTM D 1044	50
Flexural Modulus, MPa (psi)	ASTM D 790	68.9 (10,000)
<b>Thermal</b>		
Vicat Softening Temperature, °C ( °F)	ASTM D 1525	89.4 (193)
Coefficient of Linear Thermal Expansion, 10 <sup>-6</sup> mm/mm/ °C	ASTM D 696	161 (89.7 10 <sup>-6</sup> in/in/°F)
Glass Transition Temperature, °C ( °F)	DSC	-33 (-27)
<b>Rheological</b>		
Melt Index, 224 °C, 1.2 kg load, g/10 min	ASTM D 1238	32
<b>Processing Information</b>		
Recommended Drying Temperature, °C ( °F)		90-105 (190-220)
Recommended Melt Temperature (Molding), °C ( °F)		195-210 (380-410)
Recommended Melt Temperature (Extrusion), °C ( °F)		195-210 (380-410)
Recommended Mold Temperature, °C ( °F)		15-60 (60-140)

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

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

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 often is based on laboratory work with small-scale equipment and does not necessarily indicate end product performance or reproducibility. Formulations presented may not have been tested for stability and should be used only as a suggested starting point. 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 for 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.

