

## Technical Data Sheet

**Type:** Estane® S180A is a Shore 83A, polyester based thermoplastic polyurethane (TPU). FDA approved (21 CFR 177.2600, 177.1680)

**Uses:** Injection Molding, Extrusion

Physical Properties	Standard No.	Units	Value
Hardness	ASTM D2240	Shore A	83
Specific Gravity	ASTM D792	g/cm <sup>3</sup>	1.20
<b>Mechanical</b>			
Tensile Stress:	ASTM D412	kgf/cm <sup>2</sup>	
At 100% elongation			45
At 300% elongation			90
Tensile Strength	ASTM D412	kgf/cm <sup>2</sup>	350
Ultimate Elongation	ASTM D412	%	770
Tear Resistance (Die C)	ASTM D624	kgf/cm	90
Abrasion Loss	ISO 4649	mm <sup>3</sup>	30
<b>Compression Set</b>			
At 23°C X22hr		%	15
At 70°C X22hr		%	35
Mold Shrinkage	ASTM D955	m/m	0.020
<b>Thermal</b>			
Vicat Softening Temperature	ASTM D1525	°C	85

\*Test samples were annealed at 100°C and 24 hours at room temperature before testing.

\*\*These are typical values and should not be used for specifications.

## Injection Molding Guide

These settings are to be used only as a guide. This is a typical injection molding temperature profile based on the Test Machine (conditions based on a 75 ton machine with a general purpose screw – L/D 17 – Ø 35mm). The optimal run conditions for specific equipment will vary depending on the machine and mold design.

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