

## Technical Data Sheet

**Type:** ESTANE<sup>®</sup> S385A is a Shore 85A, polyester based thermoplastic polyurethane (TPU) with excellent transparency.

**Uses:** Injection Molding

Physical Properties	Standard No.	Units	Value
Hardness	ASTM D2240	Shore D Shore A	85
Specific Gravity	ASTM D792	g/cm <sup>3</sup>	1.19
<b>Mechanical</b>			
Tensile Stress:	ASTM D412	kgf/cm <sup>2</sup>	
At 100% elongation			55
At 300% elongation			100
Tensile Strength	ASTM D412	kgf/cm <sup>2</sup>	350
Ultimate Elongation	ASTM D412	%	780
Tear Resistance (Die C)	ASTM D624	kgf/cm	95
Abrasion Loss	ISO 4649	mm <sup>3</sup>	35
<b>Compression Set</b>			
At 23°C X22hr		%	15
At 70°C X22hr		%	45
Mold Shrinkage	ASTM D955	m/m	0.026
<b>Thermal</b>			
Vicat Softening Temperature	ASTM D1525	°C	62

\*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.

## Drying Conditions

Drying	Conditions
Recommend 1	70-80°C for 4-5 hours by dehumidifying dryer

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### Injection Conditions

Barrel Temperature	
Feeding Zone	180~195
Metering Zone	185~200
Nozzle	190~205
Injection Conditions (I)	
Injection Pressure (psi)	1700~2300
Injection Speed	Moderate
Hold pressure (psi)	1200-1800
Injection Time(s)	12 -18

Mold Temperature	
	10-40
Injection Conditions (II)	
Back Pressure (psi)	30-80
Screw Speed (rpm)	180-200
Cycle Time(s)	25-35

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