

# Tecophilic™ SP Series TPU

## Solution Processable Thermoplastic Polyurethane

**Type:** Medical grade, solution processable, hydrophilic aliphatic polyether-based TPU

**Features:** This series of hydrophilic TPU is specially formulated to absorb equilibrium water contents of up to 150% of the weight of dry resin. The Tecophilic™ SP series has been designed to be dissolved and processed via solution methods. The Tecophilic™ SP grades are free of melt processing additives to promote homogeneous dissolution.

**Process:** Solution methods

Products & Properties	ASTM Test	SP-80A-150	SP-93A-100	SP-60D-60
Durometer (Shore Hardness)	D2240	70A	83A	41D
Specific Gravity	D792	1.10	1.13	1.15
Ultimate Tensile (psi)	D412			
Dry		2000	2200	8300
Wet		700	1400	3100
Ultimate Elongation (%)	D412			
Dry		1000	1040	500
Wet		600	620	300
Water Absorption (%)	Lubrizol Method	150	100	60

Note: These test results are based on a small samples of Tecophilic™ polyurethanes and do not necessarily represent average results from larger test samples. This information should not be used for establishing engineering or manufacturing guidelines or specifications.

### Handling and Processing Conditions:

Tecophilic™ SP series products may be dissolved in several solvents for use in processes such as coating, casting, dipping, spinning or spraying. Depending on the solvent system of choice, up to 10% water may be incorporated as a co-solvent to enhance dissolution. Further guidance on solvent processing of TPU is available at Lubrizol Life Science Health's (LLS Health) [Resource Hub](#) and by contacting our [technical solutions team](#).