

# Tecoflex® TPU - Clear

**Type:** Medical Grade Aliphatic Polyether-based Thermoplastic Polyurethanes (TPUs)

**Features:** Variety of hardnesses, offers an inherent ultraviolet (UV) stability that resists yellowing by aging and sterilization, good mechanical properties and can be color-matched

**Process:** Extrusion and Injection Molding

Products & Properties	ASTM Test	EG-80A	EG-85A	EG-93A	EG-100A	EG-60D	EG-65D	EG-68D	EG-72D
<b>Durometer (Shore Hardness)</b>	D2240	72A	77A	87A	94A	51D	60D	63D	67D
<b>Specific Gravity</b>	D792	1.04	1.05	1.08	1.09	1.09	1.10	1.10	1.11
<b>Flexural Modulus (psi)</b>	D790	1,000	2,300	3,200	10,000	13,000	37,000	46,000	92,000
<b>Ultimate Tensile (psi)</b>	D412	5,800	6,200	7,700	8,200	8,300	8,300	8,300	8,100
<b>Ultimate Elongation (%)</b>	D412	660	550	390	370	360	360	350	310
<b>Tensile Modulus (psi)</b>	D412								
<b>at 100% Elongation</b>		300	600	1000	1600	1800	2200	2600	3400
<b>at 200% Elongation</b>		500	900	1900	3000	2900	3000	3700	4800
<b>at 300% Elongation</b>		800	1400	4300	5600	5600	6000	6300	7100
<b>Mold Shrinkage (in/in)</b>	D955	.008-.012	.008-.012	.006-.010	.006-.010	.004-.008	.004-.008	.004-.008	.004-.006

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

## HANDLING CONSIDERATIONS

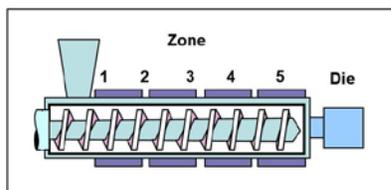
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Properties of all thermoplastic polyurethane products in the molten state are adversely affected by moisture. For best results, always dry the material at least two hours at 65.5°C (150°F) or overnight at 54.4°C (130°F) in a machine mounted dehumidifying dryer (a desiccant dryer delivering air at 1 liter/sec/ kg at -40°C dew point (1 cfm/lb at -40°F dew point)). A dehumidifying dryer hopper or one shot loader is also recommended. Depending on the applied processing technique, the maximum moisture level should be 0.05%. Never exceed 500°F (260°C) melt temperature!

### Processing Conditions:

- Tecoflex® TPU's can be processed on any conventional extruder or molder.

### Recommended Starting Extrusion Temperature Profile:

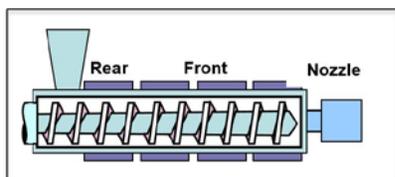


	EG-80A	EG-85A	EG-93A	EG-100A	EG-60D	EG-65D	EG-68D	EG-72D
	°F/°C							
<b>Zone 1</b>	340/171.1	340/171.1	350/176.6	350/176.6	360/182.8	360/182.8	370/187.7	370/187.7
<b>Zone 2</b>	350/176.6	350/176.6	360/182.8	360/182.8	370/187.7	370/187.7	380/193.3	380/193.3
<b>Zone 3</b>	360/182.8	360/182.8	370/187.7	370/187.7	380/193.3	380/193.3	390/198.8	390/198.8
<b>Zone 4</b>	370/187.7	370/187.7	370/187.7	370/187.7	390/198.8	390/198.8	400/204.4	400/204.4
<b>Adapter 5</b>	370/187.7	370/187.7	370/187.7	370/187.7	400/204.4	400/204.4	410/210	410/210
<b>Die</b>	370/187.7	370/187.7	380/193.3	380/193.3	400/204.4	400/204.4	410/210	410/210

Screen Pack Recommendation: 100/500/250

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**Recommended Starting Injection Molding Temperature Profile:**



	<b>EG-80A</b>	<b>EG-85A</b>	<b>EG-93A</b>	<b>EG-100A</b>	<b>EG-60D</b>	<b>EG-65D</b>	<b>EG-68D</b>	<b>EG-72D</b>
	°F/°C							
<b>Rear</b>	310/154.4	325/162.7	325/162.7	325/162.7	360/182.2	375/190.5	375/190.5	375/190.5
<b>Front</b>	325/162.7	325/162.7	325/162.7	350/176.6	375/190.5	390/198.8	400/204.4	410/210
<b>Nozzle</b>	335/168.3	335/168.3	335/168.3	360/182.2	380/193.3	400/204.4	400/204.4	410/510
<b>Melt</b>	<380/<193.3	<380/<193.3	<385/<196.1	<410/<210	<410/<210	<430/<221.1	<430/<221.1	<440/<226.6
<b>Mold</b>	40-80/4.4-26.6	40-80/4.4-26.6	50-100/10-37.7	50-110/10-43.3	50-120/10-48.8	50-120/10-48.8	50-120/10-48.8	50-130/10-54.4

**For further information refer to Lubrizol Advanced Materials processing guides.**

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