

# Tecoflex® TPU – 40% Barium Sulfate

**Type:** Medical Grade Aliphatic Polyether- based Thermoplastic Polyurethanes (TPUs) with 40% loading of Barium Sulfate

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

**Process:** Extrusion or Injection Molding

Products & Properties	ASTM Test	EG-80A-B40	EG-85A-B40	EG-93A-B40	EG-100A-B40	EG-60D-B40	EG-65D-B40	EG-72D-B40
<b>Durometer (Shore Hardness)</b>	D2240	78A	86A	95A	98A	65D	78D	82D
<b>Specific Gravity</b>	D792	1.48	1.50	1.52	1.53	1.53	1.54	1.55
<b>Flexural Modulus (psi)</b>	D790	1,500	3,700	4,700	14,000	27,000	97,000	179,000
<b>Ultimate Tensile (psi)</b>	D412	4,700	4,900	6,500	6,600	6,800	6,200	5,700
<b>Ultimate Elongation (%)</b>	D412	660	590	430	390	370	330	190
<b>Tensile Modulus (psi)</b>	D412							
<b>at 100% Elongation</b>		500	900	1,400	2,100	2,200	3,000	4,300
<b>at 200% Elongation</b>		900	1,400	2,000	2,700	2,900	3,500	NA
<b>at 300% Elongation</b>		1,200	1,800	3,100	4,300	4,700	5,300	NA
<b>Mold Shrinkage (in/in)</b>	D955	.008-.012	.008-.012	.006-.010	.006-.010	.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.

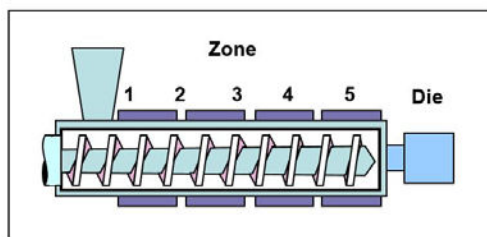
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## HANDLING CONSIDERATIONS

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:**

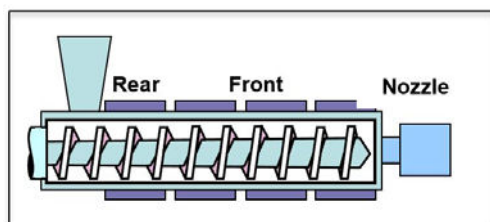


	EG-80A-B40	EG-85A-B40	EG-93A-B40	EG-100A-B40	EG-60D-B40	EG-65D-B40	EG-68D-B40	EG-72D-B40
	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
<b>Zone 1</b>	340/171.1	340/171.1	340/171.1	350/176.6	350/176.6	350/176.6	350/176.6	360/182.8
<b>Zone 2</b>	350/176.6	350/176.6	350/176.6	360/182.8	360/182.8	360/182.8	360/182.8	370/187.7
<b>Zone 3</b>	360/182.8	360/182.8	360/182.8	370/187.7	370/187.7	370/187.7	370/187.7	380/193.3
<b>Zone 4</b>	370/187.7	370/187.7	370/187.7	370/187.7	370/187.7	370/187.7	370/187.7	390/198.8
<b>Adapter 5</b>	370/187.7	370/187.7	370/187.7	370/187.7	370/187.7	370/187.7	370/187.7	390/198.8
<b>Die</b>	370/187.7	370/187.7	370/187.7	380/193.3	380/193.3	380/193.3	380/193.3	390/198.8

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Screen Pack Recommendation: 100/500/250

**Recommended Starting Injection Molding Temperature Profile:**



	EG-80A-B40	EG-85A-B40	EG-93A-B40	EG-100A-B40	EG-60D-B40	EG-65D-B40	EG-72D-B40
	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°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
<b>Front</b>	325/162.7	325/162.7	325/162.7	350/176.6	375/190.5	390/198.8	410/210
<b>Nozzle</b>	335/168.3	335/168.3	335/168.3	360/182.2	380/193.3	400/204.4	410/510
<b>Melt</b>	<380/<193.3	<380/<193.3	<385/<196.1	<410/<210	<410/<210	<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	50-130/10-54.4

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

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