

# Tecoflex® TPU – 20% Barium Sulfate

**Type:** Medical Grade Aliphatic Polyether-based Thermoplastic Polyurethanes (TPUs) with 20% 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 and Injection Molding

Products & Properties	ASTM Test	EG-80A-B20	EG-85A-B20	EG-93A-B20	EG-100A-B20	EG-60D-B20	EG-65D-B20	EG-68D-B20	EG-72D- B20
<b>Durometer (Shore Hardness)</b>	D2240	73A	83A	90A	93A	55D	63D	73D	75D
<b>Specific Gravity</b>	D792	1.24	1.25	1.27	1.29	1.32	1.32	1.30	1.31
<b>Flexural Modulus (psi)</b>	D790	1,200	2,700	5,000	17,000	27,000	82,000	76,600	125,000
<b>Ultimate Tensile (psi)</b>	D412	5,100	5,600	6,900	7,100	7,500	7,000	7,000	6,500
<b>Ultimate Elongation (%)</b>	D412	710	630	440	370	370	320	340	270
<b>Tensile Modulus (psi)</b>	D412								
<b>at 100% Elongation</b>		400	700	1,000	1,700	2,000	2,900	2,700	3,600
<b>at 200% Elongation</b>		600	1,100	1,800	2,600	3,100	3,600	3,500	4,200
<b>at 300% Elongation</b>		900	1,600	3,100	4,900	5,600	6,000	5,600	NA
<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.

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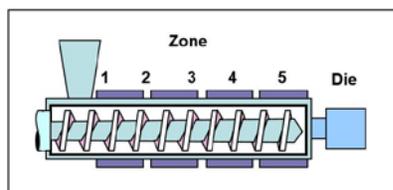
## HANDLING CONDITIONS:

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:

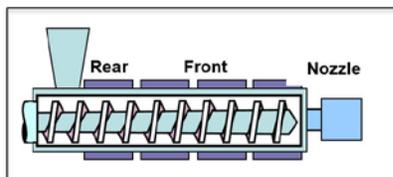


	EG-80A-B20	EG-85A-B20	EG-93A-B20	EG-100A-B20	EG-60D-B20	EG-65D-B20	EG-68D-B20	EG-72D-B20
	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
<b>Zone 1</b>	340/171.1	340/171.1	340/171.1	350/176.6	350/176.6	350/176.6	350/176.6	360/182.8
<b>Zone 2</b>	350/176.6	350/176.6	350/176.6	360/182.8	360/182.8	360/182.8	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

Screen Pack Recommendation: 50/250/100

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**Recommended Starting Injection Molding Temperature Profile:**



	<b>EG-80A-B20</b>	<b>EG-85A-B20</b>	<b>EG-93A-B20</b>	<b>EG-100A-B20</b>	<b>EG-60D-B20</b>	<b>EG-65D-B20</b>	<b>EG-68D-B20</b>	<b>EG-72D-B20</b>
	°F/°C	°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	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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