

Tecothane® TPU – 40% Barium Sulfate

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

Features: Variety of hardnesses, good mechanical properties, very good chemical resistance, radiopaque and can be color-matched

Process: Extrusion or Injection Molding

Products & Properties	ASTM Test	TT-2074A-B40	TT-2085A-B40	TT-2095A-B40	TT-2055D-B40	TT-2065D-B40	TT-2075D-B40
Durometer (Shore Hardness)	D2240	83A	88A	97A	64D	75D	84D
Specific Gravity	D792	1.57	1.58	1.59	1.62	1.64	1.65
Flexural Modulus (psi)	D790	2,800	3,800	12,000	24,000	58,000	421,000
Ultimate Tensile (psi)	D412	3,600	4,200	6,700	6,800	6,900	7,100
Ultimate Elongation (%)	D412	700	540	470	380	330	25
Tensile Modulus (psi)	D412						
at 100% Elongation		600	1000	1700	2700	3100	NA
at 200% Elongation		800	1100	2100	3300	3800	NA
at 300% Elongation		1000	1700	3500	5000	6000	NA
Mold Shrinkage (in/in)	D955	.008-.012	.008-.012	.006-.010	.004-.008	.004-.008	.004-.006

Note: These test results are based on small samples of Tecothane® 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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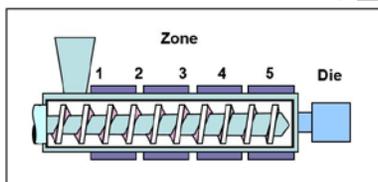
HANDLING CONSIDERATIONS

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 95°C (200°F) or overnight at 80°C (180°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 0.02%. Never exceed 500°F (260°C) melt temperature!

Processing Conditions:

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

Recommended Starting Extrusion Temperature Profile:

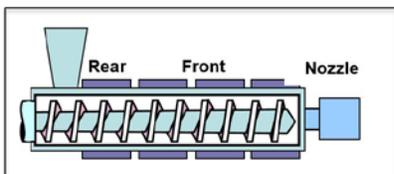


	TT-2074A-B40	TT-2085A-B40	TT-2095A-B40	TT-2055D-B40	TT-2065D-B40	TT-2069D-B40	TT-2072D-B40	TT-1075D-B40
	°F/°C							
Zone 1	360/182.8	370/187.7	370/187.7	380/193.3	380/193.3	380/193.3	390/198.8	390/198.8
Zone 2	370/187.7	380/193.3	380/193.3	390/198.8	390/198.8	390/198.8	400/204.4	400/204.4
Zone 3	380/193.3	390/198.8	390/198.8	400/204.4	400/204.4	400/204.4	410/210	410/210
Zone 4	390/198.8	400/204.4	400/204.4	410/210	410/210	410/210	420/215.5	420/215.5
Adapter 5	400/204.4	410/210	410/210	420/215.5	420/215.5	420/215.5	420/215.5	420/215.5
Die	400/204.4	410/210	410/210	420/215.5	420/215.5	420/215.5	430/221.1	430/221.1

Screen Pack Recommendation: 50/250/100

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Recommended Starting Injection Molding Temperature Profile:



	TT-2074A-40	TT-2085A-B40	TT-2095A-B40	TT-2055D-B40	TT-2065D-B40	TT-2069D-B40	TT-2072D-B40	TT-2075D-B40
	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
Rear	330/165.5	365/185	370/187.7	370/187.7	370/187.7	370/187.7	370/187.7	375/190.5
Front	350/176.6	375/190.5	385/196.1	385/196.1	385/196.1	385/196.1	385/196.1	390/198.8
Nozzle	355/179.4	380/193.3	390/198.8	395/201.6	400/204.4	400/204.4	400/204.4	405/207.2
Melt	<400/<204.4	<410/<210	<415/<212.7	<420/<215.5	<435/<223.8	<435/<223.8	<440/<226.6	<450/<232.2
Mold	50-90/10-32.2	50-110/10-43.3	50-120/10-48.8	50-130/10-	50-130/10-54.4	50-130/10-54.4	50-130/10-54.4	50-130/10-54.4

For further information refer to Lubrizol Advanced Materials processing guides.

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