



# Carbothane™ Aromatic TPU B20 Series

**Type:** Radiopaque Grades – 20% loading of Barium Sulfate

**Features:** Medical Grade Aromatic Polycarbonate-based TPUs with very good mechanical properties, chemical resistance, excellent oxidative stability and can be color-matched

**Process:** Extrusion, Injection Molding or Solution

Products & Properties	ASTM Test	AC-4075A-B20	AC-4085A-B20	AC-4095A-B20	AC-4055D-B20
Durometer (Shore Hardness)	D785	78A	90A	95A	56D
Specific Gravity	D792	1.38	1.40	1.43	1.44
Ultimate Tensile (psi)	D412	8300	8900	9300	10000
Ultimate Elongation (%)	D412	400	360	300	350
Tensile (psi)	D412				
at 100% Elongation		560	1700	3300	3600
at 200% Elongation		1300	3500	5700	5400
at 300% Elongation		3400	6600	n/a	8600
Flexural Modulus (psi)	D790	1800	5700	10900	20700
Vicat Softening Point (°C)	D1525	55	82	94	95
Mold Shrinkage (in/in) (1"x.25"x6" bar)	D955	0.011	0.010	0.009	0.009

**Note:** These test results are based on small samples of Carbothane® 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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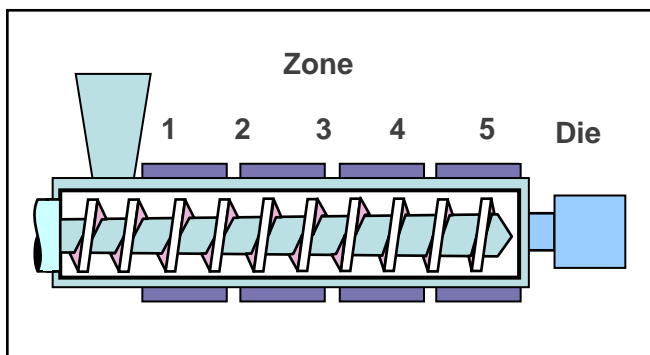
**Handling Conditions:**

Properties of all thermoplastic polyurethane products in the molten state are adversely affected by moisture. For the 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 to exceed 500°F (260°C) melt temperature.

**Processing Conditions:**

Carbothane™ Aromatic TPU's can be processed on any conventional extruder or molder.

**Recommended Starting Extrusion Temperature Profile:**



	AC-4075A-B20	AC-4085A-B20	AC409A-B20	AC-4055D-B20
	°F/°C	°F/°C	°F/°C	°F/°C
<b>Zone 1</b>	390/199	390/199	390/199	410/210
<b>Zone 2</b>	400/204	400/204	400/204	420/215
<b>Zone 3</b>	410/210	410/210	410/210	430/221
<b>Zone 4</b>	410/210	410/210	410/210	430/221
<b>Adapter 5</b>	400/204	400/204	400/204	420/215
<b>Die</b>	400/204	400/204	400/204	420/215

Screen Pack Recommendation: 88/60/250/100/88

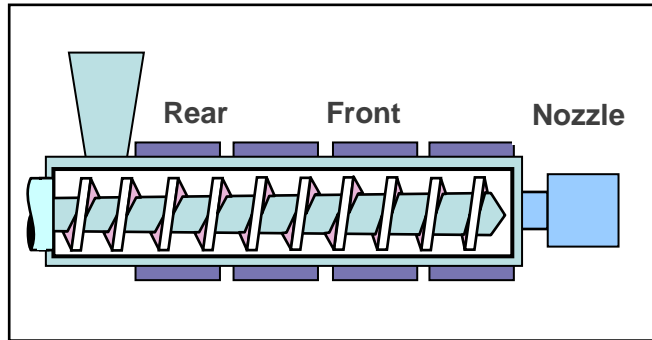
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Lubrizol LifeSciences

TECHNICAL DATA SHEET

Recommended Starting Injection Molding Temperature Profile:



	AC-4075A-B20	AC-4085A-B20	AC-4095A-B20	AC-4055D-B20
	°F/°C	°F/°C	°F/°C	°F/°C
Rear	365/185	365/185	374/190	374/190
Front	365/185	365/185	392/200	392/200
Nozzle	356/180	356/180	356/180	356/180
Melt	365/185	365/185	374/190	374/190
Mold	50-80/10-27	50-80/10-27	50-80/10-27	50-100/10-38

For Further information, refer to Lubrizol Advanced Materials processing guides.

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