## Quadrathane<sup>™</sup> ALC-95A-B20

## Thermoplastic Polyurethane Elastomer (PC Based)

**Biomerics**, LLC

## Message:

Quadrathane™ ALC-95A-B20 is high performance aliphatic polycarbonate thermoplastic polyurethane. The polymer is loaded with 20% barium sulfate by weight, is naturally white, and supplied in small pellets for ease of processing. The material exhibits excellent mechanical properties, oxidative stability, biocompatibility, superior biostability in long term implantable devices, chemical resistance, non-yellowing during aging and softening at body temperature. The resin has consistent melt flow properties making it ideal for extrusion.

Quadrathane™, Quadraflex™, Quadraban™ and Quadraplast™ performance polymers are primarily used in life science and medical applications including vascular access devices, surgical supplies, respiratory devices, tracheotomy devices, and other medical applications. Typical end products include tubing, catheter parts, balloons, and various medical device components. These performance polymers are available in a variety of durometers, radiopacifiers, colors, and custom formulations.

General Information					
Filler / Reinforcement	Barium sulfate, 20% filler by weight				
Features	Antioxidation				
	Workability, good				
	Good liquidity				
	Good color stability				
	Good chemical resistance				
	Biocompatibility				
	aliphatic				
	Resistance				
Uses	Pipe fittings				
	Human implant				
	Surgical instruments				
	Medical/nursing supplies				
Appearance	White				
Forms	Particle				
Processing Method	Extrusion				
	Injection molding				
Physical	Nominal Value	Unit	Test Method		
Specific Gravity	1.35	g/cm³	ASTM D792		
Melt Mass-Flow Rate (MFR) (190°C/2.16					
kg)	7.5	g/10 min	ASTM D1238		
Molding Shrinkage - Flow	0.60 - 1.0	%	ASTM D955		
Hardness	Nominal Value	Unit	Test Method		
Durometer Hardness (Shore A)	95		ASTM D2240		
Mechanical	Nominal Value	Unit	Test Method		
Flexural Modulus	68.9	MPa	ASTM D790		

Tensile StressASTM D412100% strain13.2MPaASTM D412200% strain29.0MPaASTM D412Tensile Strength (Break)48.3MPaASTM D412Tensile Strength (Break)400%ASTM D412Tensile Strength (Break)60.10hrStrength (Break)Post Cure Time (38'C)50.10hrStrength (Break)Post Cure Time (38'C)54.4"CStrength (Break)Dying Temperature54.4"CStrength (Break)Suggested Max Moisture< 3.0E-3%Strength (Break)Nozel Temperature196"CStrength (Break)Nozel Temperature196"CStrength (Break)Nozel Temperature196"CStrength (Break)Nozel Temperature204"CStrength (Break)Nozel Temperature510-3.51.0Strength (Break)Strength (Break)Strew Compresion Ratio2.51.3.51.3Strength (Break)Strength (Break)Strey Congression Ratio4.44-32.2"CStrength (Break)Strey Congression Ratio4.44Strength (Strength (Break))Strength (Break)Strey Congression Ratio4.00"CStrength (Break)Strey Congression Ratio19.4"CStrength (Break)Strey Congression Ratio6.00"CStrength (Break)Strey Congression Ratio19.4"CStrength (Break)Strey Congression Ratio19.4"CStrength (Break)Strey Congression	Elastomers	Nominal Value	Unit	Test Method
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Injection instructions     Injection Speed: 10 g/secCooling/Hold TIme: Long, at least 50% of cycle (20 to 60 sec depending on thickness)     Extrusion   Nominal Value   Unit     Drying Temperature   54.4   °C     Drying Time   4.0   hr     Suggested Max Moisture   < 0.030	Injection Rate	Slow		
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Back Pressure 6.89 - 12.4 MPa	Melt Temperature	193	°C	
	Die Temperature	193 - 216	°C	
Extrusion instructions	Back Pressure	6.89 - 12.4	MPa	
	Extrusion instructions			

Screen Pack: 250 meshScrew Speed: Low sheer, 150 to 250 rpmWater Bath: 80 to 110°F

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