ChronoFlex® AL 75A-B20

Thermoplastic Polyurethane Elastomer (PC Based)

AdvanSource Biomaterials Corp.

Message:

ChronoFlex AL is a family of biodurable aliphatic polycarbonate-based thermoplastic urethanes designed to overcome surface degradation such as stress-induced microfissures.

With a long history of reliable performance in both long and short term devices, this medical grade polymer has the versatility to be used across a broad range of applicational areas ranging from oncology and neurology to cardiovascular disease management.

These ether-free polyurethane elastomers are biostable and display a low modulus of elasticity, excellent solvent resistance and limited softening in-vivo. These products are adaptable to most standard manufacturing processes and are available in hardnesses ranging from 75 Shore A to 75 Shore D. AdvanSource Biomaterials synthesizes and manufactures medical grade materials offering the ability to tailor physical and mechanical characteristics to support and enhance your end product design.

These mechanical characteristic's, critical to the design and development of medical devices, can incorporate a wide range of physical and chemical properties while maintaining core characteristics such as biodurability and biocompatibility. In most materials, specialized characteristics such as the addition of colorant agents or antimicrobial properties (where applicable) can be added to the polymer to provide a homogenous material and limit secondary processing steps.

In addition, radiopaque agents may also be incorporated into the formula to provide additional product enhancements and may contain up to 40%, by weight, of a radiopaque agent thus allowing varied-scale visibility options.

With an expanding range of secondary operations including custom solution development, prototype coating capabilities, and project management services, ASB's expert team of chemists, scientists, engineers and industry professionals assist in every stage of customers' projects, from concept initiation through full-scale manufacture.

General Information				
Features	Aliphatic			
	Biocompatible			
	Good Chemical Resistance			
	Good Strength			
	High ESCR (Stress Crack Resist.)			
	No Animal Derived Components			
Uses	Medical/Healthcare Applications			
Agency Ratings	ISO 10993 Part 10			
	ISO 10993 Part 11			
	ISO 10993 Part 5			
	USP Class VI			
Forms	Pellets			
Physical	Nominal Value	Unit	Test Method	
Specific Gravity	1.10 to 1.40	g/cm³	ASTM D792	
Melt Mass-Flow Rate (MFR) (205°C/3.26				
kg)	2.0 to 26	g/10 min	ASTM D1238	
Hardness	Nominal Value	Unit	Test Method	
Durometer Hardness (Shore A)	75		ASTM D2240	
Mechanical	Nominal Value	Unit	Test Method	
Tensile Strength			ASTM D638	
Break	27.6 to 62.1	MPa		

50% Strain	2.41 to 4.48	MPa	
100% Strain	3.79 to 5.86	MPa	
200% Strain	5.52 to 8.27	MPa	
300% Strain	8.27 to 13.8	MPa	
Tensile Elongation (Break)	350 to 750	%	ASTM D638
Injection	Nominal Value	Unit	
Drying Temperature - Desiccant Dryer	71.1 to 93.3	°C	
Drying Time - Desiccant Dryer	3.0 to 4.0	hr	
Dew Point	-40.0	°C	
Suggested Max Moisture	0.050	%	

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