ChronoFlex® AR

Thermoplastic Polyurethane Elastomer (PC Based)

AdvanSource Biomaterials Corp.

Message:

The ChronoFlex AR and ChronoFlex AR-LT products are aromatic polycarbonate urethanes designed for molding, casting and dip coating applications. These unique materials are fully synthesized in liquid providing superior strength & elongation while maintaining the inherent polycarbonate advantages of long-term permanent durability and resistance to Environmental Stress Cracking (ESC). Additionally, they may be electrospun or used in water emulsion processes.

ChronoFlex AR & AR-LT polymers are ideal in applications requiring exceptional flexural endurance such as artificial heart diaphragms, vascular grafts, or for use in the fabrication of blood contact surfaces, such as coatings.

The ChronoFlex AR & AR-LT demonstrates an inherent low-tack property, which allows for pulsatile flow in-situ, an innovative characteristic optimal for devices such as VADs and artificial valves components.

This product line is offered in a wide range of viscosity/concentration configurations based upon specific product requirements.

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	Aromatic
	Biocompatible
	Good Strength
	High Elasticity
	High ESCR (Stress Crack Resist.)
	No Animal Derived Components
Uses	Medical/Healthcare Applications
Agency Ratings	ISO 10993 Part 5
	USP Class VI
Forms	Liquid
Processing Method	Casting
	Dip Coating
	Injection Molding

Physical	Nominal Value	Unit
Solids Content	8.0 to 25	%
Viscosity		
22% Solids	10.0 to 50.0	Pa·s

8% Solids	0.100 to 0.800	Pa·s	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength			ASTM D638
Break	20.7 to 68.9	MPa	
50% Strain	1.72 to 4.14	MPa	
100% Strain	2.76 to 6.89	MPa	
200% Strain	4.83 to 13.8	MPa	
300% Strain	6.55 to 24.1	MPa	
Tensile Elongation (Break)	600 to 1200	%	ASTM D638

Recommended distributors for this material

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