

ChronoFlex[®] AR



Liquid Polymer

Strength, elongation and durability in liquid form.

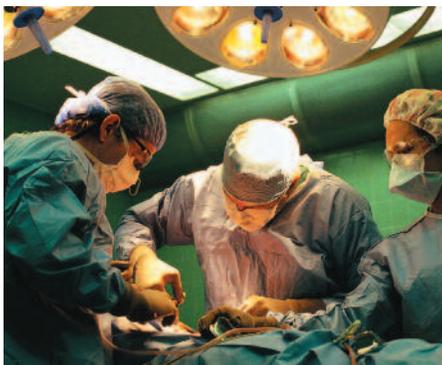
Description

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.



The ASB Advantage

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 characteristics, 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 formulations, such as the addition of colorant agents or antimicrobial properties (where applicable) can be added to the polymer to provide a homogeneous 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 assists in every stage of customers' projects, from concept initiation through full-scale manufacture.

An ASB product

USP CLASS VI

ANIMAL-FREE ORIGIN CERTIFIED

LIQUID POLYMER

BIODURABLE

INHERENT MECHANICAL STRENGTH

LOW THROMBOGENICITY

SELF-SEALING

SUPERIOR ELASTICITY

CAN BE ELECTROSPUN

ESC RESISTANT

MOLDABLE

CASTABLE

DIP COATABLE

BIOCOMPATIBLE

AdvanSource
biomaterials

Creating Technology. Enabling Success.

TYPICAL MECHANICAL CHARACTERISTIC RANGES

ChronoFlex AR and AR-LT*

PHYSICAL PROPERTIES

	CF AR	CF AR-LT	ASTM Standard
% Solids (+/- 2%)	8% - 25%	8% - 25%	
Viscosity (cps)			
@ 8% Solids	100 - 800	200 - 1,000	
@ 22% Solids	10,000 - 50,000	15,000 - 50,000	
Ultimate Tensile Strength (psi)	3,000 - 10,000	6,000 - 10,000	D638/D882
Tensile (psi)			
@50% elongation	250 - 600	450 - 850	D638/D882
@100% elongation	400 - 1000	650 - 1200	D638/D882
@200% elongation	700 - 2000	1000 - 2300	D638/D882
@300% elongation	950 - 3500	1600 - 4000	D638/D882
Ultimate Elongation (%)	600 - 1,200	500 - 1,100	D638/D882

*Data provided herein is meant to show a general range for the ChronoFlex AR and ChronoFlex AR-LT product lines; these properties can be tailored to meet specific values based on customer requirements.

BIOLOGICAL TEST RESULTS

CF AR & AR-LT

MEM Elution	Pass - Meets ISO 10993-5 guidelines
AGAR Overlay	Pass - Meets ISO 10993-5 guidelines
Class VI testing	Pass - Meets the USP guidelines for Class VI
Acute Systemic Toxicity	Pass - Meets the USP guidelines for Class VI
Intracutaneous Toxicity	Pass - Meets the USP guidelines for Class VI
Intramuscular Implantation (1 week macroscopic evaluation)	Pass - Meets the USP guidelines for Class VI
Phthalate Free	Does not contain or come in contact with DEHP (Di (2-ethylhexyl) phthalate)
Animal-Free Origin Certified	Certified to be free from Infectious Agents such Bovine Spongiform Encephalopathy (BSE) and Transmissible Spongiform Encephalopathy (TSE)

FDA Master Files

It is the responsibility of the user to establish safety with the FDA for their specific medical device. However, AdvanSource Biomaterials has on file an MAF with the FDA which may be referenced by specific request.

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