

# ChronoPrene™ 40A

Thermoplastic Elastomer

CardioTech International, Inc.

Message:

This biocompatible elastomer may be considered as a substitute for rubber, latex and silicone materials. Soft and compliant, the ChronoPrene resins offer a high flexural modulus, as well as a superior combination of tensile strength and elongation.

An easy molding, high-flow material, ChronoPrene can be processed using conventional extrusion, injection molding and blowmolding methods. Its physical properties make it an optimal material for applications requiring elastic characteristics, such as compliant/ non-compliant balloons, endoscopic and laparoscopic inflation bags.

ChronoPrene can be processed at low temperatures, resulting in excellent surface smoothness and superior elasticity. ChronoPrene exhibits high abrasion resistance, durability and UV stability and is available in hardnesses ranging from 5 Shore A to 75 Shore A.

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	Hydrophobic
	Good UV resistance
	Good formability
	Good wear resistance
	High liquidity
	Good chemical resistance
	Durability
	Soft
	Biocompatibility
	No kinetic components
	Extended tensile rate
	Excellent appearance
Uses	Medical/nursing supplies
Agency Ratings	ISO 10993 Part 5
	USP Class VI
Forms	Particle
Processing Method	Blow molding
	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	2.0 - 26	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	40		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Fracture	2.76 - 4.14	MPa	ASTM D638
50% strain	0.483 - 0.621	MPa	ASTM D638
100% strain	0.758 - 0.896	MPa	ASTM D638
200% strain	1.10 - 1.24	MPa	ASTM D638
300% strain	1.45 - 1.59	MPa	ASTM D638
Tensile Elongation (Break)	600 - 900	%	ASTM D638
Injection	Nominal Value	Unit	
Drying Temperature - Desiccant Dryer	71.1 - 93.3	°C	
Drying Time - Desiccant Dryer	3.0 - 4.0	hr	
Dew Point	-40.0	°C	
Suggested Max Moisture	0.050	%	

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