

ChronoPrene™



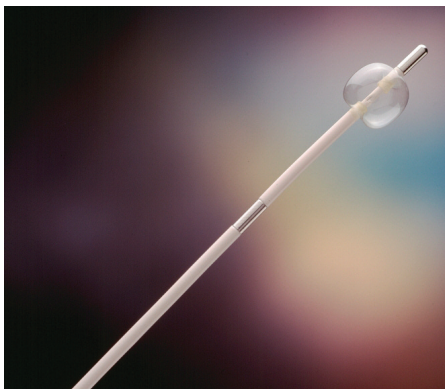
Soft, Compliant and Elastic. Yet Durable, Resilient and Robust.

Description

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.



CHRONOPRENE FOR USE IN COMPLIANT/
NON-COMPLIANT BALLOONS

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 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.

An ASB product

BIODURABLE

OUTSTANDING SUBSTITUTE FOR
RUBBER OR LATEX MATERIALS

SUPERIOR ELASTICITY

EXCEPTIONALLY SOFT

AVAILABLE IN RADIOPAQUE FORM

EXTRUDABLE / INJECTION
MOLDABLE

PHTHALATE FREE

UV STABLE

EXCELLENT CHEMICAL
RESISTANCE

HIGH ELONGATION

HYDROPHOBIC

USP CLASS VI

BIOCOMPATIBLE

ANIMAL-FREE ORIGIN CERTIFIED

AdvanSource
biomaterials

Creating Technology. Enabling Success.



TYPICAL MECHANICAL CHARACTERISTIC RANGES

ChronoPrene

						ASTM Standard
Durometer Range Available	5 Shore A – 75 Shore AD2240					
Melt Flow Range	2 – 26 g/10 min					D1238
MECHANICAL PROPERTY RANGES (TYPICAL EXAMPLE RANGES SHOWN)*						
Durometer	5A	15A	40A	75A		
Melt Flow Parameters	125° C/2.16 kg	200° C/5 kg	200° C/5 kg	200° C/5 kg		
Ultimate Tensile Strength (psi)	50 – 100	900 – 1300	400 – 600	1200 – 1400	D638	
Tensile (psi)						
@ 50% elongation	2 – 10	20 – 30	70 – 90	825 – 975	D638	
@ 100% elongation	10 - 20	40 – 50	110 – 130	975 – 1100	D638	
@ 200% elongation	20 - 30	60 – 80	160 – 180	1100 – 1300	D638	
@ 300% elongation	30 – 35	80 – 100	210 – 230	1300 – 1400	D638	
Ultimate Elongation (%)	700 – 900	1700 – 1950	600 – 900	250 – 350	D638	

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

BIOCOMPATIBILITY TESTING

	USP CLASS VI TESTED:	ISO TESTED:
MEM Elution		Meets ISO 10993-5 guidelines
AGAR Overlay		Meets ISO 10993-5 guidelines
Systemic Injection Test	Meets Class VI guidelines	
Intracutaneous Injection Test	Meets Class VI guidelines	
Intramuscular Implantation (macro)	Meets Class VI guidelines	
Phthalate Free		Does not contain or come in contact with DEHP
Animal-Free Origin Certified		BSE/TSE free

Pre-Processing Recommendations:

ChronoPrene processing can be optimized by drying to a moisture content equal to or less than 0.05% by weight prior to melt processing.

Typically, the pellets must be dried for 3-4 hours with a dryer inlet air temperature of 180°F +/- 20°F. We recommend a machine-mounted desiccant-type hopper dryer, capable of reaching and maintaining a dew point of -40°F. If dry times are in excess of 8-10 hours, a hopper dryer temperature of 120-150°F is usually sufficient to achieve optimal moisture content.

FDA Master Files It is the responsibility of the user to establish safety with the FDA for their specific medical device.

DISCLAIMER: The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made to its accuracy, suitability for particular applications or to the results to be obtained. The information does not necessarily indicate end product performance. Because of variations in methods, conditions and equipment used in processing these materials, no warranties or guarantees either expressed or implied are made to the suitability or fitness of the materials for any particular purpose. Full-scale testing and end product performance are the responsibility of the user. AdvanSource Biomaterials Corporation shall not be liable for and the customer assumes all risk and liability of any use, sale or handling of any material beyond AdvanSource Biomaterials' direct control. Nothing contained herein is to be considered as permission, recommendation, or inducement to practice any patented invention without permission of the patent owner.