ChronoThane™ P 55D

Thermoplastic Polyurethane Elastomer (Polyether)

AdvanSource Biomaterials Corp.

Message:

ChronoThane P is a family of aromatic ether based polyurethane elastomers. With a long history of reliable performance, this medical grade polymer has the versatility to be used across a broad range of applicational areas including catheters, ports and access devices.
These biocompatible materials possess characteristics such as low coefficient of friction, low extractables, dimensional stability, high impact resistance, and excellent tear strength.
ChronoThane P allows for ease of manufacturability and can be processed using conventional extrusion or injection molding equipment. These materials 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	Aromatic		
	Biocompatible		
	Good Dimensional Stability		
	Good Tear Strength		
	High Impact Resistance		
	Low Extractables		
	Low Friction		
	No Animal Derived Components		
Uses	Medical/Healthcare Applications		
Agency Ratings	ISO 10993 Part 5		
	USP Class VI		
Forms	Pellets		
Physical	**Nominal Value**	**Unit**	**Test Method**
Melt Mass-Flow Rate (MFR) (190°C/3.26 kg)	2.0 to 26	g/10 min	ASTM D1238
Water Absorption (Saturation)	1.2 to 1.4	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D)	55		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength			ASTM D638
Break	34.5 to 55.2	MPa	

50% Strain	20.7 to 24.1	MPa	
100% Strain	23.4 to 26.2	MPa	
200% Strain	27.6 to 32.4	MPa	
300% Strain	34.5 to 38.6	MPa	
Tensile Elongation (Break)	300 to 500	%	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	%

Recommended distributors for this material

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