

ChronoThane P™

| Aromatic Polyether-based Polyurethanes

Product Description

ChronoThane P is a family of medical-grade 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 applications such as catheters, ports and access devices.

These biocompatibility tested materials possess characteristics such as low extractables, dimensional stability, high impact resistance, and strong 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 hardness ranging from 75 Shore A to 75 Shore D. Properties can be tailored to meet specific values based on customer requirements.

General	Key Features	• Consistent Elastomeric Performance • Strong Tear Strength • High Impact Resistance	• Animal-Free Origin Certified
	Forms	• Pellet • Solution	
	Processing Methods	• Extrusion • Injection Molding • Blow Molding	
	Common Applications	• Cardiology • Surgery • Endoscopic • Urology	• Nephrology • Neurology • Gastroenterology

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

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Technical Properties

Mechanical Characteristics*	ChronoThane P™		ASTM Standard	
	Durometer Range Available	75 Shore A – 75 Shore D		D2240
	Water Absorption	1.17 – 1.37%		D570
	Melt Flow (g/10 min)	2 – 26 g/10 min 190°- 205°C/3.26 kg		D1238
	Example Product	80A	55D	
	Ultimate Tensile Strength (psi)	4000 – 7000	5000 – 8000	D638
	Tensile Strength (psi)			
	@50% elongation	650 – 850	3000 – 3500	
	@100% elongation	800 – 1000	3400 – 3800	
	@200% elongation	1200 – 1400	4000 – 4700	
	@300% elongation	1650 – 2000	5000 – 5600	
	Ultimate Elongation (%)	680 – 850	300 – 500	

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

Biocompatibility testing:

Tests: MEM Elution, USP Class VI

The ChronoThane P product line was pre-assessed for biocompatibility by testing representative grades in the product line. A grade was tested using a MEM Elution test and was considered non-cytotoxic. Additionally, a grade was tested for USP Class VI, and the test article was determined to meet the requirements of the USP guidelines for Class VI Plastics – 70 ° C. Please reach out for more specific information.

Pre-Processing Recommendations:

ChronoThane P 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.

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