

ChronoThane P™

| Aromatic Polyether-based Urethanes

Product Description

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.

General	Key Features	<ul style="list-style-type: none"> • Consistent Elastomeric Performance • Excellent Tear Strength • High Impact Resistance 	<ul style="list-style-type: none"> • USP Class VI • Biocompatible • Animal-Free Origin Certified
	Forms	<ul style="list-style-type: none"> • Pellet 	
	Processing Methods	<ul style="list-style-type: none"> • Extrusion • Injection Molding • Blow Molding 	
	Common Applications	<ul style="list-style-type: none"> • Cardiology • Surgery • Endoscopic • Urology • Nephrology • Neurology • Gastroenterology 	

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Technical Properties

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

*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	TEST	USP Class VI Tested	ISO GUIDELINE
	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 in contact with DEHP
	Animal-Free Origin Certified		BSE/TSE free

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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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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