

ChronoThane T™

| Aliphatic Polyether-based Polyurethanes

Product Description

ChronoThane T is a family of medical-grade aliphatic 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 materials possess characteristics such as low extractables, dimensional stability, high impact resistance, and strong tear strength.

ChronoThane T can be tailored to meet specific Melt Flow Index ranges to suit your manufacturing or extrusion processes.

ChronoThane T 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.

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 T™				ASTM Standard
	Durometer Range Available	75 Shore A – 75 Shore D			D2240
	Water Absorption	1.00 – 1.16%			D570
	Melt Flow (g/10 min)	2 – 26 g/10 min 170° - 205°C/2.16 kg - 3.26 kg			D1238
	Example Product	80A	93A	93A BaSO4 20%	93A BaSO4 40%
	Ultimate Tensile Strength (psi)	4900 – 6200	3000 – 8000	5400 – 7000	4000 – 6000
	Tensile Strength (psi)				
	@50% elongation	350 – 550	650 – 900	900 – 1100	1100 – 1400
	@100% elongation	550 – 800	1000 – 2000	1000 – 1600	1400 – 1800
	@200% elongation	900 – 1400	1700 – 2500	1800 – 2300	2000 – 2300
	@300% elongation	1300 – 2100	2600 – 4300	2800 – 3100	2700 – 3100
	Ultimate Elongation (%)	550 – 800	350 – 650	400 – 650	400 - 600

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

Biocompatibility testing:

Tests: USP Class VI

The ChronoThane T 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 T 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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