

ChronoThane T™

| Aliphatic Polyether-based Urethanes

Product Description

ChronoThane T is a family of aliphatic ether based polyurethane elastomers.

These biocompatible materials possess characteristics such as low coefficient of friction, low extractables, dimensional stability, high impact resistance, and excellent tear strength.

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

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 T™ (typical example ranges shown)*				ASTM Standard	
	Durometer Range Available	75 Shore A – 75 Shore D				D2240
	Water Absorption	1.00 – 1.16%				D570
	Melt Flow	2 – 26 g/10 min 170°- 205°C/2.16 kg - 3.26 kg				D1238
	Durometer	80A	93A	93A – B20	93A – B40	ASTM
	Ultimate Tensile Strength (psi)	4900 – 6200	3000 – 8000	5400 – 7000	4000 – 6000	D638
	Tensile (psi)					
	@50% elongation	350 – 550	650 – 900	900 – 1100	1100 – 1400	D638
	@100% elongation	550 – 800	1000 – 2000	1000 – 1600	1400 – 1800	D638
	@200% elongation	900 – 1400	1700 – 2500	1800 – 2300	2000 – 2300	D638
@300% elongation	1300 – 2100	2600 – 4300	2800 – 3100	2700 – 3100	D638	
Ultimate Elongation (%)	550 – 800	350 – 650	400 – 650	400 - 600	D638	

*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	TEST	USP Class VI	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 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.

AdvanSource Biomaterials
 229 Andover Street
 Wilmington, MA 01887
 Tel: 978-657-0075
www.advbiomaterials.com

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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