

# ChronoThane T™



AVAILABLE IN HARDNESSES RANGING FROM

75 Shore A to 75 Shore D

Versatile and Effective; Strong dimensional control through ease of manufacturability.

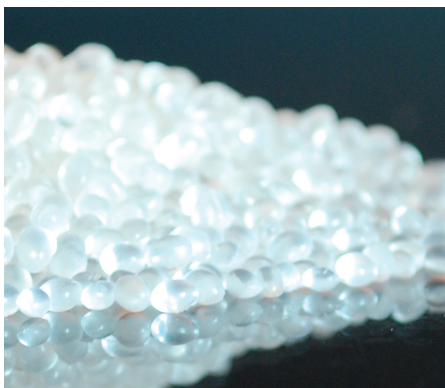
## Description

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.



CHRONOTHANE T IN PELLET FORM

## The ASB Advantage

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 biodegradability 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.

## An ASB product

DIMENSIONAL STABILITY

AVAILABLE IN ANTIMICROBIAL FORM

TAILORED TO MEET MECHANICAL SPECIFICATIONS

CONSISTENT ELASTOMERIC PERFORMANCE

AVAILABLE IN RADIOPAQUE FORM

AVAILABLE IN SOLUTION FORM

EASE OF PROCESSING

NON CYTOTOXIC

HIGH IMPACT RESISTANCE

LOW EXTRACTABLES

LOW COEFFICIENT OF FRICTION

USP CLASS VI

BIOCOMPATIBLE

ANIMAL-FREE ORIGIN CERTIFIED

**AdvanSource**  
biomaterials

Creating Technology. Enabling Success.



TYPICAL MECHANICAL CHARACTERISTIC RANGES

## ChronoThane T

		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

### MECHANICAL PROPERTY RANGES (EXAMPLE RANGES SHOWN)\*

Durometer	80A	93A	93A – B20	93A – B40	
Ultimate Tensile Strength (psi)	4900 – 6200	3000 – 8000	5400 – 7000	4000 – 6500	D638
Tensile (psi)					
@ 50% elongation	300 – 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

	USP CLASS VI TESTED:	ISO TESTED:
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 come 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.

**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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