HydroThane™ AL 93A (Non-Hydrated)

Thermoplastic Polyurethane Elastomer

AdvanSource Biomaterials Corp.

Message:

HydroThane is a hydrophilic thermoplastic polyurethane elastomer, ranging in water absorption rates from 5% to 25%. This unique extrudable hydrophilic product line was designed to provide maximum physical properties for use in extruded or injection molded components, while allowing for consistent single-step surface lubricity characteristics and a low coefficient of friction.
Available in aliphatic and aromatic versions, these elastomers have the ability to rapidly absorb water while maintaining high tensile strength and high elongation, resulting in a permanently lubricious polymer.
HydroThane can be processed using conventional extrusion or injection molding equipment.
Being hydrophilic even when dehydrated, they should be sealed and stored in a cool, dry place and are available in hardnesses of 80 Shore A and 93 Shore A.
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 biodurability 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.

General Information	
Features	Biocompatible High Elongation High Strength Hydrophilic Low Friction No Animal Derived Components
Agency Ratings	ISO 10993 Part 5 USP Class VI
Forms	Pellets
Processing Method	Extrusion Injection Molding

Physical	Nominal Value	Unit	Test Method
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	2.0 to 26	g/10 min	ASTM D1238
Water Content	5.0 to 20	wt%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A)	93		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**

Tensile Strength			ASTM D638
Break	33.1 to 37.9	MPa	
50% Strain	5.52 to 7.24	MPa	
100% Strain	8.27 to 10.3	MPa	
200% Strain	12.4 to 15.2	MPa	
300% Strain	16.5 to 19.3	MPa	
Tensile Elongation (Break)	550 to 650	%	ASTM D638

Recommended distributors for this material

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