Material Introduction

PEBAX® Polymer

Pebax® - Polyether Block Amide

Overview-

Since its development in 1935, nylon has found a home in applications ranging from automotive and aerospace to life saving medical devices. Today the family of nylon resins has expanded to meet the demands of a wide range of custom applications.

Pebax® nylons have high elastic memory, better low temperature properties, and higher elongation at break than other thermoplastic elastomers. It is available with a Shore D hardness range from 35 to 72. This produces a broad spectrum of mechanical properties which make it perfect for catheter jackets; varying degrees of flexibility or stiffness as required.

Extruded Pebax® tubing in a variety of colors, sizes, and durometers.

APPLICATIONS

- Catheter jackets
- Sub-assembly aids
- Electrical and electronics
- Packaging
- Textiles

AVAILABLE PRODUCTS

- Extruded tubing
- Custom profiles
- Multi-lumens
- Sub-Lite-Wall™ tubing
- Monofilament

QUICK SUMMARY OF PROPERTIES

- Variable durometers (Shore D hardness 35 to 72)
- Low density
- Gamma sterilizable
- Bondable
- Tougher than Nylon 11
- Class VI approved resins available
- Low water absorption

FLEXURAL MODULUS

MOISTURE ABSORPTION

HARDNESS

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PEBAX

The information presented in this publication is believed to be accurate and is not intended to constitute a specification. Property characteristics are dramatically impacted by geometry and processing method, thus properties of extruded parts may vary. In some instances, data may not be available for publication and will be notated as "na" where applicable.

These tables are meant to serve as a general guideline only. Users should evaluate the material to determine suitability for their own particular application.

PHYSICAL	ASTM	D72	D70	D63	D55	D40	D35
Density (g/cc)	D792	1.01	1.01	1.01	1.01	1.00	1.00
Water Absorption (%)	ISO 62-1	0.9	1.1	1.1	1.2	1.2	1.2
MECHANICAL	**ASTM**						
Hardness, Shore D	D2240	61 - 69	61 - 69	58 - 64	50 - 54	35 - 42	25 - 33
Ultimate Tensile Strength (MPa)	ISO 527 (1 or 3)	56	54	53	52	40	39
Elongation at Break (%)	ISO 527 (1 or 3)	> 300	> 350	> 350	> 450	> 450	> 600
Flexural Modulus (MPa)	ISO 178	513	390	285	170	77	21
THERMAL	**ASTM**						
Melt Temp (°C)	ISO 12086	174	172	169	159	160	144