Venlon 6GN (Natural Cast Nylon)
Technical Data Sheet

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Product Description

This natural grade, produced by monomer casting process, demonstrates similar characteristics to Nylon 66. Cast materials contain significantly lower stress levels combined with high strength, good creep and wear resistance resulting in great dimensional stability when machining. It offers the possibility of manufacturing large-sized stock shapes as well as custom castings which require only minimal machining. With material being more dimensionally stable comparing to the one of widely used polyolefin, it an be used for a much closer tolerance parts.

Applications

Nylon is used for a wide range of industrial components both for Original Equipment Manufacture and maintenance. Some examples: wear pads, support and guide wheels, conveyor rollers, tension rollers, pulleys and pulley linings, cams, hammer heads, scrapers, gear wheels, sprockets, feed screws, star wheels, chopping boards, insulators, bearing slides, roller sleeves, impact blocks, full & segmented gears, outrigger pads, pump seats, gate rollers & support wheels, etc.

Other Material Properties

It combines high strength, stiffness and hardness with good creep and wear resistance, heat ageing properties, very good impact properties and machinability. As well as high tensile strength and high modulus of elasticity.

Key Features and Benefits

- High Impact Resistance
- Good Load Bearing Properties
- Excellent Vibration Resistance
- Resistance to Brittleness & Deterioration
- Good dimensional stability
- FDA Compliant
- Very Good Wear & Abrasion Resistance

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Properties	Value	Unit	ASTM Test Method
Specific Gravity	1.15-1.17	g/cm^3	D792
Tensile Strength	65-80	Mpa	D638
Tensile Elongation	>25	%	D638
Tensile Modulus	>3000	Mpa	D638
Compressive Strength	13,500 – 16,000	psi	D695
Compressive Modulus	325,000 – 400,000	psi	D695
Flexural Strength	112	Mpa	D790
Flexural Modulus	420,000 – 500,000	psi	D790
Shear Strength	10,000 – 11,000	psi	D732
Notched Izod Impact	>4	kJ/m^2	D256
Hardness Rockwell	83	M	D785
Hardness, Shore	78 - 84	D	D2240
Melting Point	215-220	^0C	D3418
Coeffcient of Linear Thermal Expansion	80-95 x 10^{-6}	m/(m.K)	D696
Deformation Under Load	0.5 – 2.5	%	D621
Deflection Temperature			
264 psi	200 – 300	^0F	D648
66 psi	300 – 400	^0F	D648
Continous Service Temperature	105	^0C	-
Intermittent Service Temperature	165	^0C	-
Coefficient of Friction, Dynamic	0.26		D1894
Water Absorption			
24 hours	0.5 - 0.8	%	D570
Saturation	4.0 – 6.7	%	D570
Dielectric Strength	500 – 600	v/mil.	D149
Dielectric Constant			
60 Hz	3.7		D150
1000 Hz	3.7		D150
1 MHz	3.7		D150
Compliance FDA USDA 3A UL 94 HB			

The facts stated and recommendations contained herein are based on experiments and information believed to be reliable. No guarantee is made of the accuracy, however and the products are sold without warranty, expressed or implied, and upon the conditions that purchasers shall conduct tests to determine suitability for their intended use.