

Polikim KESTAMID® PA6G Polyamide 6

Category : Polymer , Thermoplastic , Nylon , Nylon 6

Material Notes:

Kestamid® is also known as Cast Polyamide or Cast Nylon. Kestamid® is an engineering plastic used commonly in all industrial branches for its superior mechanical, physical, chemical and electrical properties. It is replacing aluminum, copper, bronze, steel, fiber, brass and other metals in many applications with superior advantages. It is cheaper, lighter, harder and more durable than these metals. In terms of cost, Kestamid® is 1/7th of bronze, 1/5th of copper and 1/3rd of brass. As its density is low, purchase and delivery costs become less. Using Kestamid® instead of metal components helps push selling price and delivery cost down. It contributes significantly to the final producer in reducing costs and increasing market share. As it does not require lubrication, maintenance costs are also reduced to a minimum. High wear and impact resistances make Kestamid® durable. Taking its operational life into consideration, the advantages and superiorities of Kestamid® compared to the above-mentioned metals become even more obvious. Kestamid® is a "fix and forget" type of material. It is possible to produce steel bush core gears, pulleys and mixer fans or produce cylinders with steel axis by making use of techniques specific to the production of Kestamid® combined with the mechanical resistance of metals. Information provided by Polikim Polimer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Polikim-KESTAMID-PA6G-Polyamide-6.php

Physical Properties	Metric	English	Comments
Density	1.15 g/cc	0.0415 lb/in ³	ISO 1183
Water Absorption at Saturation	7.0 %	7.0 %	ISO 62

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	84	84	ISO 868
Tensile Strength, Ultimate	83.4 MPa	12100 psi	ISO 527
Elongation at Break	>= 20 %	>= 20 %	ISO 527
Tensile Modulus	4.00 GPa	580 ksi	ISO 527
Compressive Strength	93.2 MPa	13500 psi	ISO 604
Compressive Modulus	2.70 GPa	392 ksi	ISO 604
Izod Impact, Notched (ISO)	5.60 kJ/m ²	2.66 ft-lb/in ²	ISO 180
Charpy Impact Unnotched	NB	NB	ISO 179
Coefficient of Friction	0.39	0.39	
K Factor (Wear Factor)	0.44	0.44	[mg/km]
K (wear) Factor	500 x 10 ⁻⁸ mm ³ /N-M	248 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	

Thermal Properties	Metric	English	Comments
CTE, linear	80.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	44.4 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359
Melting Point	220 $^\circ\text{C}$	428 $^\circ\text{F}$	
Maximum Service Temperature, Air	110 $^\circ\text{C}$	230 $^\circ\text{F}$	continuous
	170 $^\circ\text{C}$	338 $^\circ\text{F}$	short term

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+14$ ohm-cm	$\geq 1.00\text{e}+14$ ohm-cm	ISO 60093
Surface Resistance	$\geq 1.00\text{e}+13$ ohm	$\geq 1.00\text{e}+13$ ohm	ISO 60093
Dielectric Constant	3.7	3.7	ISO 60250
Dielectric Strength	25.0 kV/mm	635 kV/in	ISO 50243

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