

TECAST™ 6PAG

Polyamide 6
Ensinger Inc.

Message:

TECAST™ cast nylon, available in a variety of grades, offers a combination of good mechanical properties, excellent bearing and wear characteristics, and the large-size capabilities of the casting process. Its fatigue resistance, noise damping ability, corrosion resistance, and light weight make TECAST™ ideal for metal replacement applications, such as bearings, gears, sheaves, and sprockets. At one-eighth the weight of bronze, TECAST™ is easier to handle and maintain than metals such as iron, aluminum, brass, and bronze, which it typically replaces in industrial wear applications. Other materials that TECAST™ commonly replaces because of its superior performance are laminated phenolics, elastomers, and wood. TECAST™ has excellent wear and abrasion resistance, resulting in extended component life and lower maintenance cost. Its formulations are readily available in rod, plate, and tube. Nonstandard shapes, such as rings, discs, and blocks can be economically produced in small quantities with short lead times. Custom parts can be cast-to-size or near-net-shape with relatively inexpensive tooling.

Its unique combination of strength, wear resistance, toughness, machinability, and corrosion resistance make TECAST™ cast nylon ideal for bearings, thrust washers, bushings, wear pads, sheaves, rollers, gears, sprockets, and wheels. TECAST™ is commonly used in construction equipment, material handling systems, amusement park rides, pulp and paper processing equipment, steel mills and industrial equipment.

A graphite powder-filled cast type 6 nylon with properties similar to 6PAM but better suited to wet applications.

General Information			
Filler / Reinforcement	Graphite fiber reinforced material		
Features	Noise reduction		
	Machinable		
	Good corrosion resistance		
	Good wear resistance		
	Good wear resistance		
	Fatigue resistance		
	Good toughness		
Uses	Wheels		
	Bushing		
	Gear		
	Industrial application		
	Roller		
	Architectural application field		
	Metal substitution		
	Thrust washer		
	Bearing		
Forms	Plate		
	Bar		
	Pipe		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.15 - 1.17	g/cm³	ASTM D792
Water Absorption (23°C, 24 hr)	1.2	%	ASTM D570

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	115		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2410	MPa	ASTM D638
Tensile Strength (Yield, 23°C)	75.8	MPa	ASTM D638
Tensile Elongation (Break, 23°C)	20	%	ASTM D638
Flexural Modulus (23°C)	2410	MPa	ASTM D790
Flexural Strength (23°C)	86.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Unnotched Izod Impact (23°C)	32	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	188	°C	ASTM D648
1.8 MPa, not annealed	93.3	°C	ASTM D648
Melting Temperature	220	°C	ASTM D2133
CLTE - Flow	7.2E-5	cm/cm/°C	ASTM D696
Maximum Service Temperature			
Intermittent	149	°C	
Long Term	93	°C	UL 746B
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	20	kV/mm	ASTM D149
Dielectric Constant ¹ (23°C, 60 Hz)	3.70		ASTM D150
Additional Information			
Data obtained from extruded shapes material.			
NOTE			
1.	50% RH		

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