TECAST™ 6XAU

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 high heat (up to 260°F continuous), weather resistant cast type 6 nylon with superior fatigue-resistance and bearing properties.

General Information	
Features	Noise reduction
	Machinable
	Good corrosion resistance
	Good wear resistance
	Good wear resistance
	Fatigue resistance
	Good weather resistance
	Heat resistance, high
	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 - 1.16	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)	37	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	177	°C	
Long Term	127	°C	UL 746B
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.0E+14	ohms·cm	ASTM D257
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		

Recommended distributors for this material

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