



PA6 G/C — Cast Polyamide

Centrifugal Casting Polyamide | PA6-G | Kestamid G

▲ Suitable Options Available

Material Type

PA 6 (Casting)

Form: Large Diameter Bar/Pipe/Plate

Combustion Class: **HB (UL 94)**

MATERIAL DESCRIPTION

PA6 G/C is a heavy-duty casting polyamide produced on a large scale and with high internal quality by centrifugal casting method. It stands out with its higher modulus of elasticity (3400 MPa), higher softening temperature (200°C) and lower water absorption (2.2%) compared to PA-6 C. This material, which can operate without lubrication, is a light, silent and corrosion-resistant alternative to bronze and steel in large-diameter gear and crane systems.

MECHANICAL AND PHYSICAL PROPERTIES (ISO/ASTM)

Feature	Unit	Value	Feature	Unit	Value
Intensity	g/cm ³	1.15	Shore D Hardness	—	83
Yield Stress	MPa	80	Friction Coefficient	—	~ 0.35
Yield Elongation	%	5	Melting Temperature	°C	~ 220
Breaking Stress	MPa	55	Softening Temperature	°C	~ 200
Elongation at Break	%	30	Work. Gene. Coefficient	10 ⁻⁴ K ⁻¹	0.8
Elasticity Modulus	MPa	3400	Dielek. Strength	kV/mm	~ 25
Impact Resistance	kJ/m ²	Unbreakable	Surface Resistance	Ohm	10¹²
Water Absorption (24h)	%	2.2	Service Temperature	°C	-40 / +110

AREAS OF APPLICATION

Large Diameter Gear Systems

Crane and Bridge Wheels

Bearing Shell and Bushings

Guide and Rail Systems

Construction Machinery Components

Ship and Port Equipment

CHEMICAL RESISTANCE AND GENERAL PROPERTIES

It has excellent resistance to oils, greases, fuels and hydrocarbons; It is sealed and offers long-lasting performance in dry operating conditions without requiring lubrication. PA-6 is superior in terms of dimensional stability with a higher modulus of elasticity and less water absorption (2.2%) compared to C; This feature makes it suitable for large diameter parts with tight tolerances. It is weak against strong acids and bases; Use in prolonged contact with concentrated solutions is not recommended. It is preferred as a silent, lightweight and maintenance-free structural solution that replaces metals in shipbuilding, heavy construction machinery, crane systems and port equipment.

The technical information specified in this document reflects the reference values of international ISO/ASTM standards. Water absorption can affect dimensional stability; Preconditioning is recommended in applications with critical tolerances.

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