

Nylacast Cast Nylon 6

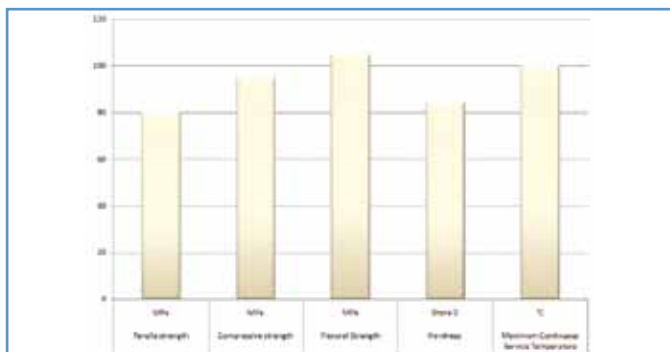
Cast Nylons are a range of polyamides produced by a casting process involving the anionic polymerisation of caprolactam. This process allows the production of semi-finished plate, rod, tube and custom castings that are largely free of internal stresses. Natural cast nylon (available also in black) is the basic cast nylon 6 grade and the one from which all the other grades of cast nylon stem. Generally accepted as the primary engineering polymer, natural cast nylon is suitable for virtually any plain bearing application, not to mention a huge range of other applications for which this versatile grade finds a use. By varying the conditions of polymerisation the mechanical properties of cast nylon may be altered to suit specific applications and the performance of the basic polymer can be enhanced with the addition of various additives, fillers, lubricants and colorants (see further grades).

Compared with injection moulding and extrusion grades of polyamide, cast nylons stand out with their improved mechanical, thermal and chemical resistance properties. Specifically the material has a higher tensile, compressive

and impact strength as well as an improved resistance to creep and heat ageing. The reasons for these improved characteristics are high crystallinity and a remarkably higher molecular weight. Due to low water absorption, mechanical properties and dimensions are more stable making it suited for components that have to meet closer tolerances. Abrasion resistance and overall wear performance are probably the materials most important characteristics for use in bearing applications and in applications where food contact is involved, cast nylons may be offered as a material conforming to FDA approvals.

Natural cast nylon has the ability to operate effectively without the need for lubricants and has an increased resistance to wear of over 5 times that for plain bearings manufactured from non-ferrous metals. As is the case with virtually all nylons it is easy to machine, pleasant to work with and relatively light weight - one eighth that of brass - making the handling and fitting of large components manufactured in cast nylon a relatively easy matter.

Benefits of Cast Nylon 6



- Good mechanical, thermal and chemical resistance properties.
- Universally acknowledged as the primary engineering polymer.
- Good PV and load bearing capabilities.
- Improved characteristics over extruded polyamides.
- Good wear and abrasion resistance.
- Good dimensional stability, largely free from internal stresses.
- FDA Compliance
- Available in a wide range of sizes and colours.

Industry Users



- Petrochemical
- Aerospace
- Railways
- Ship building
- Food and food packaging
- Bottling and canning
- Pharmaceuticals
- Steel mills
- Quarrying/mining
- Cranes
- Shoe manufacturing
- Conveyors

Typical Application



- Rollers
- Switch collar
- Washers
- Bearings
- Load support
- Bushes
- Centralizers
- Cable drums
- Guide clutch
- Seals
- Blockers
- Wear pads
- Chain Guide
- Clamps
- Bespoke Components

Nylacast PA6 is available as standard plate, rod and over thousands of tube OD/ID configurations in four different lengths.

In addition cut piece derivatives, strips, billets, discs and rings up to 2.5 metres diameter as well as custom castings to specific designs are available.