



Why Is It Called Cast Nylon?

Most nylons and polymers begin their lives as pellets and powders before being molded into shape with heat and pressure. **Cast nylon 6** skips this step by undergoing a casting process that provides unique **advantages in performance and processing**. Going straight to its final form eliminates extra heat histories, maximizing molecular weight and improving **wear, abrasion, and fatigue resistance**.

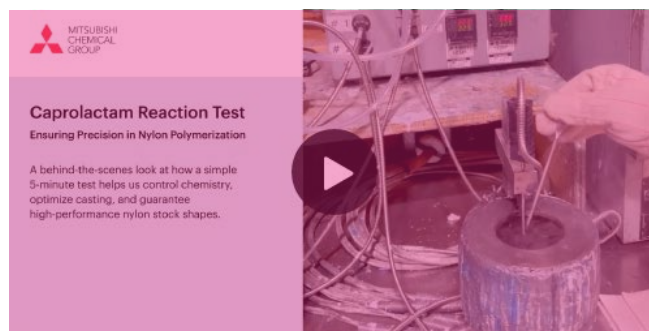
How Does the Casting Process Work?

Cast nylon 6 starts with three key ingredients:

1. **Caprolactam (nylon 6 monomer)**—A solid at room temperature that turns liquid at 300°F
2. **Catalyst**—Controls reaction speed and molecular weight
3. **Initiator**—Triggers polymerization when combined with monomer and catalyst

Every grade is tailored for performance—whether your customer needs to support extreme loads, reduce friction, or extend part life.

All three ingredients remain stable until they're brought together. Once mixed, the material begins to grow in molecular weight and **solidify into a polymer**, with casting times ranging from **five to 30+ minutes**. The speed of solidification depends on the relative amounts of catalyst and initiator as well as temperature and humidity conditions.

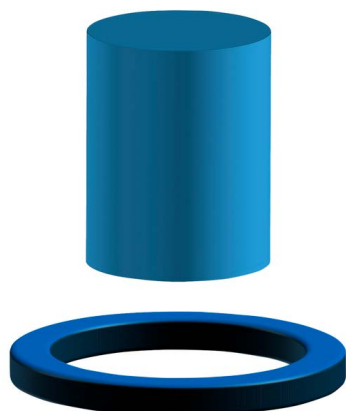


Watch the casting process in action! ([Hyperlink video](#))

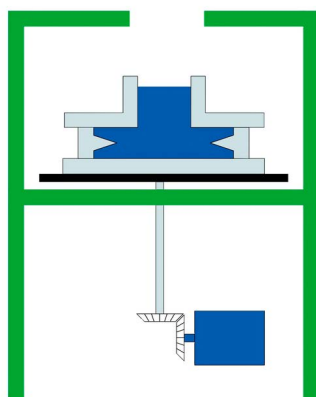


Flexible Casting Options

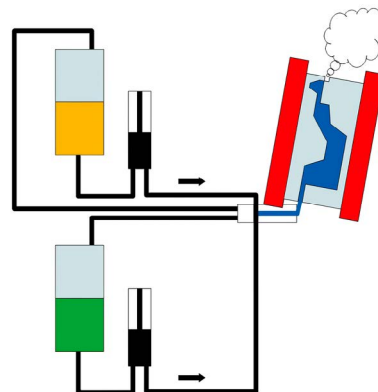
Just like a baker's pan determines the form of a cake, the mold defines the final cast nylon 6 shape. Depending on size, shape, and volume, cast nylon 6 can be produced using:



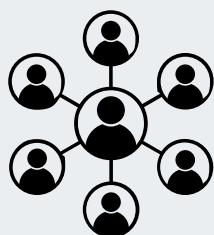
Static casting
Ideal for large, thick-walled parts



Spin casting
Produces round or cylindrical shapes



SmartCasting™
Combines the strength and wear resistance of Nylatron™ cast nylon with more efficient production and improved precision



Your partner in cast nylon.

Mitsubishi Chemical Group offers the widest range of cast nylon solutions. Let's find the right shape for your customers' needs. [Contact us.](#)

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Published May 2025