



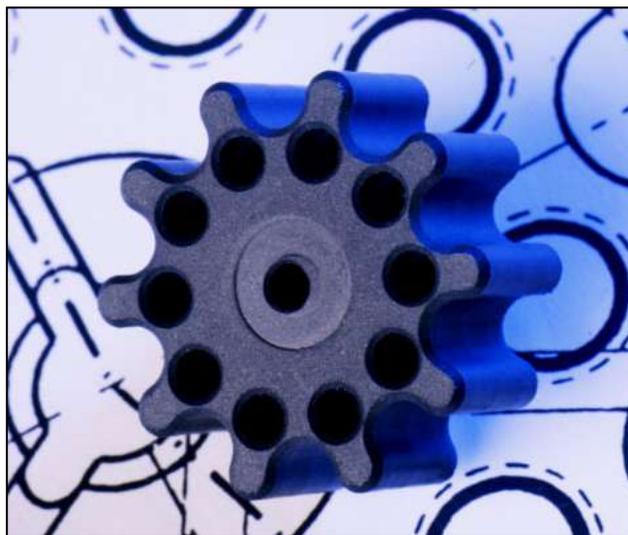
Nytef Application Ideas

New Material Significantly Increases Part Life

Background: Impellers are used extensively for metered fluid handling in a variety of industries from aerospace and automotive to pharmaceuticals and even industrial diesel engines. The equipment is commonly called “custom flow metering devices” or “positive displacement flow meters”. Regardless of the nomenclature, impellers are a critical component of any device of this type, making part performance, particularly extended service life, a must for this application.

Problem: As metering device manufacturers have developed higher throughput equipment designed to handle aggressive liquids and slurries, traditional metal materials used in impellers have been prone to failure due to excessive wear, leading to unacceptable equipment downtime.

Nytef Engineered Solution: Working closely with the engineering staff of each company, the Technical Services Group at Nytef Plastics was able to quickly identify the operating conditions of each piece of equipment, focusing on critical areas such as heat, speeds, abrasive content of fluids and other critical conditions potentially affecting part performance. Based on this key information, a custom formulated version of Nytef’s high performance Unitrex Rg was selected that exceeded even the most demanding operating conditions. In some cases, impeller replacement has been reduced from once per shift to once per week.



This impeller, machined from an ultra-high performance formulation of Unitrex custom filled PEEK, replaced one made of carbon steel and extended machine uptime on a high volume automotive adhesive dispenser by over 300%.

Industries

- Aerospace
- Automotive
- Chemical
- Food/Beverage
- Petroleum
- Pharmaceutical
- Medical
- Semiconductor
- Transportation
- Packaging/Labeling

Materials

- Acetal
- Nylon
- PEEK
- PPS
- PBT
- PPO
- PVDF
- PEI (Ultem®)
- Polycarbonate
- Custom Filled

Nytef Customer Fulfillment Centers

- Philadelphia- 1620 Woodhaven Ave., Bensalem, PA
- Chicago- 1610 Jarvis Ave., Elk Grove Village, IL
- Los Angeles- 13185 Imperial Hwy., Whittier, CA
- West Palm Beach- 6643 42nd Terrace, North, FL

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