

Stanyl®

nexeo®
plastics

Envalior
Imagine the Future

HIGH-TEMPERATURE MECHANICAL PERFORMANCE

Stanyl is a high-performance aliphatic polyamide with a melting temperature of 563° F (295° C). Due to its high crystallinity and fast crystallization speeds, it offers three key strengths: excellent high-temperature mechanical performance, wear and friction properties, and superior flow.

STANYL® IS THE MOST WIDELY USED POLYMER. THE SYMMETRY OF THE 46 STRUCTURE ENSURES THAT THE POLYMERS FIT IN THE CRYSTAL IN MULTIPLE WAYS, THEREBY GIVING RISE TO HIGH CRYSTALLIZATION SPEEDS AND HIGH CRYSTALLINITY.

CHARACTERISTICS

The first commercialization's of Stanyl® were achieved 30 years ago. Currently, it is the largest single polymer being used in the high-performance polyamide landscape. The symmetry of the chemical structure lays the foundation of its success as it provides the basis for the high degree of crystallinity and fast crystallization speed. These two features allow for the following characteristics and properties:

- High-temperature mechanical performance
- Low coefficient of friction and higher wear resistance
- High degree of water absorption
- Thermal conductivity

Mobility

Stanyl® PA46 is the first high-temperature polyamide and the only aliphatic polyamide in its class, making it an ideal choice for crankshaft balance gears. The polymers fit in the crystal in multiple ways, giving rise to high crystallization speeds and high crystallinity. This combination makes it ideal for high-temperature applications since it comes with a melting temperature of 563° F (295° C).

Applications include:

- Gears and actuators
- Bearing cages
- Chain tensioners & guides
- Air management



Consumer Goods

Stanyl® PA46 and Akulon® PA66 are reliable solutions for spatulas and other kitchenware. Stanyl PA46 offers much higher melting temperature and HDT than PA66, and both materials have significantly higher melting temperature resistance than PP and PA6. Also, Stanyl TE200F6-FC and EcoPaXX® Q-KG6-FC are food-approved.

Applications include:

- Household utensils
- Kitchenware
- Gears for home appliance



Electrical and Electronics

High-performance aliphatic polyamide is formulated to reduce fire risk. Stanyl is rigorously tested for optimal processing, creep resistance, durability, blister resistance and applicable UL safety standards. Stanyl's design stiffness and high flow properties lower the total cost to manufacturers by ensuring high yields while demonstrating superior cracking performance. Its high comparative tracking index performance reduces the risk of tracking by 50%.

Electrical examples:

- Coil bobbins
- Relays
- Switches
- Terminal blocks

Electronics examples:

- DDR4 connectors
- USB-C connectors
- Lighting systems
- E-motor electric insulation



Other Industries

Stanyl also is well suited for many applications among specialized markets.

Applications include:

- Gears & actuators
- Wear, friction, high temperature use
- Bearings



[Learn more at nexeoplastics.com/envalior/stanyl](https://nexeoplastics.com/envalior/stanyl) or contact us to request a free sample.

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