

Nylon 66 Market Forecasts to 2032 – Global Analysis By Grade (Fiber Grade, Resin Grade, Standard Grade, Heat Stabilized Grade and Other Grades), Sales Channel, Application and By Geography

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Abstracts

According to Statistics MRC, the Global Nylon 66 Market is accounted for \$6.1 billion in 2025 and is expected to reach \$7.8 billion by 2032 growing at a CAGR of 3.7% during the forecast period. Nylon 66 is a synthetic polymer made from hexamethylenediamine and adipic acid through a condensation polymerization process. It is known for its high mechanical strength, heat resistance, and durability and is widely used in automotive, textile, electrical, and industrial applications. Nylon 66 offers excellent wear resistance, chemical stability, and dimensional integrity, making it suitable for demanding engineering and performance-based uses. It is also valued for its stiffness and abrasion resistance.

According to a U.S. DOE Commercial Potential Evaluation report, the global Nylon 66 supply in 2018 required approximately 3.8 billion pounds of adiponitrile feedstock.

Market Dynamics:

Driver:

High demand in automotive sector

The automotive industry is a primary driver for the Nylon 66 market, leveraging the material's high tensile strength, heat resistance, and durability. Automakers increasingly use Nylon 66 to manufacture lightweight components, which helps reduce overall vehicle weight and improve fuel efficiency by as much as 5-7% for every 10% reduction

in weight. Its applications are diverse, ranging from engine components and fuel systems to electrical connectors and cabin interiors. Furthermore, the shift towards electric vehicles expands its use in battery modules and wiring systems, supporting the growing demand for high-performance, lightweight plastics.

Restraint:

Volatile raw material prices

The volatility of raw material prices, particularly for hexamethylene diamine and adipic acid, which are derived from petrochemicals, is a significant restraint. Fluctuations in crude oil prices directly impact the production costs of these inputs, creating uncertainty in manufacturing expenses and profit margins for producers. This price instability makes it difficult for manufacturers to maintain stable pricing, which can disrupt supply chains and lead price-sensitive industries to seek more cost-effective alternative materials with predictable costs.

Opportunity:

Advancements in material engineering

Innovations are enhancing material properties like strength, thermal stability, and wear resistance, broadening its use in high-performance applications such as aerospace and 3D printing. Additionally, the growing emphasis on sustainability is driving R&D toward bio-based and recyclable Nylon 66 variants. These eco-friendly alternatives align with stricter environmental regulations and corporate sustainability goals, opening up new market niches and applications.

Threat:

Stringent environmental regulations

Synthetic polymer is derived from fossil fuels, as a result, Nylon 66 contributes to plastic pollution and carbon emissions, and its non-biodegradable nature complicates disposal. Increasing regulatory pressure and public awareness are pushing industries toward greener, biodegradable alternatives. This trend challenges manufacturers to invest in sustainable production practices and recycling technologies, which can incur high initial costs and potentially impact their competitive positioning.

Covid-19 Impact:

The COVID-19 pandemic had a mixed impact on the Nylon 66 market. Initially, the market experienced a negative effect due to widespread supply chain disruptions, temporary shutdowns of manufacturing facilities, and a sharp decline in demand from key sectors like automotive and textiles. However, the pandemic also created positive momentum through a surge in demand for personal protective equipment (PPE). The increased need for face masks, medical gowns, and other textiles boosted the consumption of high-performance Nylon 66 fibers.

The resin grade segment is expected to be the largest during the forecast period

The resin grade segment is expected to account for the largest market share during the forecast period due to its extensive application as a high-performance engineering plastic. It is widely used across diverse industries, including automotive, electrical power distribution, consumer goods, and packaging films. The material's inherent strength, durability, and thermal stability make it an ideal choice for manufacturing appliance and automotive parts. Additionally, its versatility allows for its use in both molding and extrusion processes, catering to a broad spectrum of industrial needs.

The electrical & electronics segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the electrical & electronics segment is predicted to witness the highest growth rate, driven by Nylon 66's excellent electrical insulating properties, heat resistance, and mechanical strength, making it ideal for components like connectors, insulators, and circuit boards. The increasing production of electronic products, growing electrification in the automotive industry, and the global expansion of 5G infrastructure are significantly fueling demand. Furthermore, its application in smart devices and renewable energy systems reinforces its growing importance.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, fueled by the region's rapid industrialization and its position as a global manufacturing hub, particularly in countries like China and India. The expanding automotive, electronics, and textile industries are major consumers of Nylon 66. Furthermore, factors such as competitive labor costs, robust supply chains, rising disposable incomes, and government initiatives promoting industrial growth contribute

to the region's significant market position.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR. The region's rapid economic growth, urbanization, and expanding manufacturing base are key factors driving this high growth. Strong and growing demand from end-user industries such as automotive, textiles, and electrical & electronics, especially in emerging economies like China and India, propels the market forward. Additionally, increasing investments in infrastructure development and a rising consumer demand for durable, high-performance goods further accelerate the consumption of Nylon 66.

Key players in the market

Some of the key players in Nylon 66 Market include BASF SE, DuPont de Nemours, Inc., Ascend Performance Materials, Lanxess AG, Solvay S.A., Evonik Industries AG, Toray Industries, Inc., Mitsubishi Chemical Holdings Corporation, RadiciGroup, Huntsman Corporation, Celanese Corporation, Kuraray Co., Ltd., China National Chemical Corporation (ChemChina), Reliance Industries Limited, Arkema S.A., China Petrochemical Corporation (Sinopec), and Dairen Chemical Corporation.

Key Developments:

In May 2025, BASF announced its intention to acquire the remaining 49% share of the Alsachimie joint venture from DOMO Chemicals, which would give BASF 100% ownership. This move is aimed at strengthening BASF's production of polyamide (PA) 6.6 precursors, such as adipic acid and hexamethylenediamine adipate (AH salt), at its European hub in Chalampe, France. The transaction is expected to close by mid-2025.

In March 2025, Evonik announced it signed an agreement to license its hydrogen peroxide (H₂O₂) production technology to China Pingmei Shenma Group Nylon Technology (Shenma). Shenma is a major producer within the nylon 6 and nylon 66 value chains. The H₂O₂ from the new plant will be used to produce caprolactam, a precursor for nylon 6.

In November 2023, Solvay launched Rhodanyl® 27CR70N, a polyamide 6.6 polymer made from 100% pre-consumer recycled content that has achieved SCS Recycled Content Certification. This product is manufactured at the company's plant in Santo

Andre, Brazil, as part of its integrated polyamide chain in Latin America.

Grades Covered:

Fiber Grade

Resin Grade

Standard Grade

Heat Stabilized Grade

Other Grades

Sales Channels Covered:

Direct Sales

Indirect Sales

Applications Covered:

Automotive

Electrical & Electronics

Textile & Apparel

Industrial & Machinery

Packaging

Carpets

Consumer Goods & Appliances

Other Applications

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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