Photovoltaic Coating Market Size & Share Analysis - Growth Trends and Forecast (2026 - 2031)

> **Industry:** Coatings, Adhesives & Functional Chemicals (Chemicals & Materials)
> **Source:** https://www.mordorintelligence.com/industry-reports/photovoltaic-coating-market
> **Scraped Date:** 2026-09-17

Executive Market Summary

Market Metric	Details
Base Market Size	USD 7.42 billion
Projected Forecast (2031)	USD 7.42 billion
Growth Rate (CAGR)	8.88 %
Largest Market Region	N/A
Fastest-Growing Region	N/A

Market Visualizations & Infographics

Comprehensive Research Analysis

Overview Points List Flex 49 Share Feature End

Market Overview

Study Period	2021 - 2031
Market Size (2026)	USD 7.42 Billion
Market Size (2031)	USD 11.35 Billion
Growth Rate (2026 - 2031)	8.88 %
Fastest Growing Market	Asia-Pacific
Largest Market	Asia-Pacific
Market Concentration	Medium

Major Players*Disclaimer: Major Players sorted in no particular order

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Market Overview

Photovoltaic Coating Market Analysis by Mordor IntelligenceThe photovoltaic coating market size was valued at USD 6.86 billion in 2025 and is estimated to grow from USD 7.42 billion in 2026 to USD 11.35 billion by 2031, at a CAGR of 8.88% during the forecast period (2026-2031). The photovoltaic coating market is supported by the continued expansion of solar generation capacity and the larger glass surface area used in newer module designs. Global solar photovoltaic additions reached 698 GW in 2025, bringing cumulative installed capacity beyond 3 TW and increasing the addressable surface area for functional glass treatments. Manufacturers are placing greater emphasis on coatings that improve optical performance, manage heat, or reduce soiling, as these features can affect energy yield over a module's operating life. The photovoltaic coating market also benefits from tighter product qualification requirements, as utility developers increasingly seek documented compatibility between coatings and module bills of materials. Price pressure in the module supply chain and durability requirements remain key constraints on adoption, particularly where developers prioritize upfront cost over lifetime performance.

Key Report Takeaways

* By coating type, anti-reflective coatings held 42.67% of the photovoltaic coating market share in 2025, while self-cleaning coatings are forecast to grow at a CAGR of 9.35% through 2031.
* By application, solar panels accounted for 54.85% of the photovoltaic coating market share in 2025, while automotive photovoltaic applications are forecast to grow at a CAGR of 9.96% through 2031.
* By geography, Asia-Pacific held 41.34% of the photovoltaic coating market share in 2025 and is forecast to grow at a CAGR of 9.67% through 2031.

Key Market Trends

Global Photovoltaic Coating Market Trends and InsightsDrivers Impact Analysis*

Drivers | (~) % Impact on CAGR Forecast | Geographic Relevance | Impact Timeline |
Solar Photovoltaic (PV) Capacity Expansion and Module Manufacturing Growth | +2.5% | Global, with the highest intensity in China, India, and ASEAN | Short term (≤ 2 years) |
Efficiency Gains from Anti-Reflective and Multifunctional Coatings | +2.0% | Global, strongest in North America and Europe | Medium term (2-4 years) |
Water Scarcity and Rising Solar-Panel Cleaning Costs | +1.5% | Middle East and North Africa, with relevance in South Asia and arid Asia-Pacific areas | Short term (≤ 2 years) |
Growth of Bifacial, TOPCon, Heterojunction Technology (HJT), and Perovskite Modules | +1.8% | Global, concentrated in China and emerging in Europe and the United States | Medium term (2-4 years) |
Coating Qualification as a Bankability Differentiator for New Module Technologies | +1.2% | North America, Europe, and Australia, where bill-of-materials due diligence is stringent | Long term (≥ 4 years) |
Source: Mordor Intelligence |

Competitive Landscape

Competitive Landscape

The photovoltaic coating market is moderately fragmented. Companies such as 3M, AGC, BASF, PPG Industries, and Saint-Gobain hold advantages through broad materials capabilities, established customer relationships, and integrated supply arrangements. Suppliers with documented qualification data are better positioned to win contracts from module manufacturers and utility developers. The competitive focus is shifting from formulation to evidence of long-term performance, compatibility, and production consistency. This favors firms that can support customers from material development through module qualification, while also leaving room for smaller suppliers that address specialized retrofit or local application needs.

In February 2026, BASF announced a partnership with Xfloat Ltd. to incorporate Tinuvin 2730 ED light stabilizers into floating photovoltaic platform structures. This move reflects how materials suppliers are expanding into floating photovoltaic systems alongside conventional solar glass applications. In September 2025, Arkema announced a partnership with Catalyxx to develop a bio-based acrylic resin value chain for lower-carbon coating resins in new energy applications, including solar. These developments place product development alongside supply chain resilience and lifecycle considerations. In April 2026, Guardian Glass filed a Patent Cooperation Treaty (PCT) patent application for a lower-cost anti-reflective coating architecture designed to provide low visible reflectivity without heat treatment. This patent activity reflects continued effort to make optical performance accessible across a broader range of glass formats.

Specialty providers can compete where installation speed, customization, and local service matter more than global supply scale. Pellucere Technologies offers the MoreSun Sol dual-layer anti-reflective and anti-soiling system for factory solar glass, while nanopool GmbH offers a silicon dioxide-based liquid glass nano-coating for solar retrofit applications[2]nanopool GmbH, “Solar, Nano Coatings and Liquid Glass Technology,” nanopool GmbH, nanopool.eu.. Chinese specialty suppliers also benefit from domestic demand and the country's efforts to formalize standards for self-cleaning products. The opportunity for combined anti-reflective, self-cleaning, and passive-cooling layers remains commercially relevant but requires independently validated durability. Suppliers that can deliver fluorine-free hydrophobic performance may benefit as regulations limit some existing chemistry options. Overall, the photovoltaic coating market remains competitive, with large suppliers retaining qualification strengths while specialized firms serve distinct technical and regional needs.

Photovoltaic Coating Industry Leaders* AGC Inc.

* Saint-Gobain

* PPG Industries, Inc.

* FENZI S.p.A.

* 3M

* *Disclaimer: Major Players sorted in no particular order

Component Component 3 Scope Of The Report Bottom

Global Photovoltaic Coating Market Report ScopeA photovoltaic coating is a specialized thin-film or liquid application that either improves the efficiency of existing solar panels or converts ordinary surfaces, such as windows and walls, into active, electricity-generating solar devices.

The photovoltaic coating market is segmented by coating type, application, and geography. By coating type, the market is segmented into anti-reflective coatings, self-cleaning coatings, conductive coatings, and others. By application, the m

arket is segmented into solar panels, automotive, consumer electronics, textile, and others. The report also covers market size and forecasts for photovoltaic coating across 15 countries in major regions. The market sizes and forecasts are provided in terms of value (USD).

By Coating TypeAnti-Reflective Coatings |
Self-Cleaning Coatings |
Conductive Coatings |
Others |

Segmentation Accordion Item

By GeographyAsia-Pacific | China |
 | India |
 | Japan |
 | South Korea |
 | ASEAN Countries |
 | Rest of Asia-Pacific |
North America | United States |
 | Canada |
 | Mexico |
Europe | Germany |
 | United Kingdom |
 | France |
 | Italy |
 | NORDIC Countries |
 | Rest of Europe |
South America | Brazil |
 | Argentina |
 | Rest of South America |
Middle East and Africa | Saudi Arabia |
 | South Africa |
 | Rest of Middle East and Africa |

Frequently Asked Questions

What is current market size of Photovoltaic Coating Market?

The photovoltaic coating market size was valued at USD 6.86 billion in 2025 and is estimated to grow from USD 7.42 billion in 2026 to USD 11.35 billion by 2031, at a CAGR of 8.88% during the forecast period (2026-2031).

Which coating type led photovoltaic coating demand in 2025?

Anti-reflective coatings led demand with a 42.67% share in 2025, owing to their widespread use on solar module glass.

Why are self-cleaning coatings used on solar panels?

They can reduce dust-related generation losses and reduce the need for water-based cleaning in dry, dusty operating environments.

Which application accounted for the largest demand for photovoltaic coatings?

Solar panels accounted for 54.85% of demand in 2025, supported by high global module deployment and glass surface requirements.