

Solar Encapsulation Market Report by Material (Ethylene Vinyl Acetate, Non-Ethylene Vinyl Acetate, UV Curable Resins), Technology (Single-crystal/Polycrystalline Silicon Solar Technology, Thinfilm Solar Technology), Application (Construction, Electronics, Automotive, and Others), and Region 2024-2032

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# **Abstracts**

The global solar encapsulation market size reached US\$ 2,701.0 Million in 2023. Looking forward, IMARC Group expects the market to reach US\$ 7,802.7 Million by 2032, exhibiting a growth rate (CAGR) of 12.3% during 2024-2032.

Solar encapsulation refers to the technique used to protect solar panels and equipment against degradation due to various external and environmental factors. It involves encapsulating photovoltaic (PV) cells with a polymeric material, generally ethylene vinyl acetate (EVA) film. It helps extend the life of solar cells, mitigate stability issues, and offer protection against corrosion and ultraviolet (UV) radiation, low mechanical stress, and temperature changes. It also assists in providing adhesion between the solar cells, the top surface, and the rear surface of the PV module. In recent years, solar encapsulation has gained immense popularity as it aids in enhancing the performance, efficiency, durability, and cost-effectiveness of PV modules.

## Solar Encapsulation Market Trends:

The widespread adoption of solar panels and the escalating demand for electricity across the globe represent the primary factors driving the market growth. Additionally, there has been a substantial shift toward renewable energy sources due to the growing environmental concerns and depleting conventional energy sources. Along with this, the



increasing private and public investments to modernize the existing infrastructure are catalyzing the market growth. Besides this, the development of low-cost encapsulant materials, such as cadmium telluride and amorphous silicon cells, and non-EVA-based encapsulations, including thermoplastic polyurethane (TPU) and polyvinyl butyral (PVB), are augmenting the product demand. Moreover, the implementation of favorable policies and subsidies on the installation of solar panels by governments of various countries is propelling the market growth. As a result, the leading manufacturers are developing new encapsulants for emerging PV technologies. Other factors, including the growing need to reduce carbon footprint, rapid urbanization, technological advancements, and emerging solar energy applications for power generation, are creating a positive outlook for the market.

## Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global solar encapsulation market report, along with forecasts at the global, regional and country level from 2024-2032. Our report has categorized the market based on material, technology and application.

Breakup by Material:

Ethylene Vinyl Acetate
Non-Ethylene Vinyl Acetate
UV Curable Resins

Breakup by Technology:

Single-crystal/Polycrystalline Silicon Solar Technology
Thin-film Solar Technology
Cadmium Telluride (CdTe)
Copper Indium Gallium Selenide (CIGS)
Amorphous Silicon (a-Si)

Breakup by Application:

Construction
Electronics
Automotive
Others



## Breakup by Region:

North America

**United States** 

Canada

Asia-Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

## Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being 3M Company, Bridgestone Corporation, dnpSolar, Dow Inc., Dupont De Nemours Inc., Eastman Chemical Company, First Solar Inc., Kuraray Co. Ltd., Mitsubishi Chemical Holdings Corporation, Mitsui Chemicals Inc., RenewSys India Pvt. Ltd. and STR Holdings Inc.

## Key Questions Answered in This Report

- 1. What was the size of the global solar encapsulation market in 2023?
- 2. What is the expected growth rate of the global solar encapsulation market during 2024-2032?



- 3. What are the key factors driving the global solar encapsulation market?
- 4. What has been the impact of COVID-19 on the global solar encapsulation market?
- 5. What is the breakup of the global solar encapsulation market based on the material?
- 6. What is the breakup of the global solar encapsulation market based on the technology?
- 7. What are the key regions in the global solar encapsulation market?
- 8. Who are the key players/companies in the global solar encapsulation market?



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