LUCINTEL INSIGHT
DECEMBER 2021

FIVE TRENDS SHAPING THE FUTURE OF THE AUTOMOTIVE INSULATION MARKET

The automotive insulation market is growing due to the constant increase in demand for vehicles, owing to rising population and spending capabilities, particularly in developing countries. Furthermore, rising urbanization, upgrades in lifestyle, and a surge in demand for luxury and comfort vehicles in several countries are propelling the growth of the automotive insulation market. Some of the key trends in the automotive insulation market are bio-based polyurethane

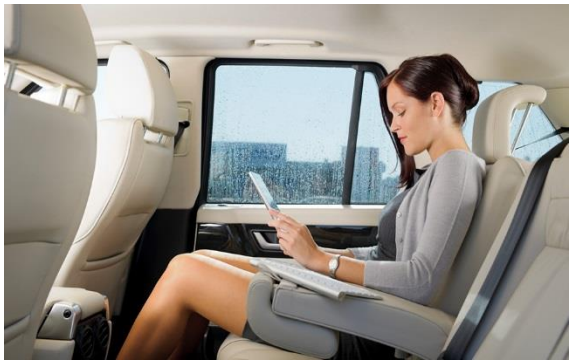
foam, liquid-applied sound-deadening coatings, acoustic meta-material for sound absorbing, fourth-generation blowing agents, and glass wool insulation. The major growth drivers for this market are the growth in automotive production and increasing demand for materials which provide high acoustic insulation and energy efficiency.

The automotive insulation market is divided into several segments, such as PU foam, elastomeric foam, glass wool, and others. Key players in the automotive insulation market include Recticel, BASF, Armacell, Saint-Gobain, SoundTech Inc., Aeroflex Company Limited, UFP Technologies, Johns Manville, Avon Group Manufacturing, Siderise Group, and Covestro. These have been working on different strategies to drive sales using highly influential marketing approaches; however, as we examine the challenges and opportunities ahead in this market, companies can benefit from a strategy of developing bio-based polyurethane foam and liquid-applied sound-damping coatings, along with the key target market trends we have identified. Lucintel predicts the global automotive insulation market will be valued at $2.0 billion by 2025, with an expected CAGR of approx. 1.0% between 2020 and 2025.

Lucintel identifies five trends set to influence the global automotive insulation market. Most of the industry players and experts agree that these five trends will accelerate developments in the automotive insulation industry in the near future. In terms of the widespread knowledge about the automotive insulation market already on the horizon, there is still a lack of unified perspective on the direction the industry is moving to proactively address developments. To help bring more clarity to this gap, our study aims to provide insights concerning the direction that changes are taking and how these changes will impact the automotive insulation market.

1. Development of Bio-Based Polyurethane Foam

Bio-based polyurethane foam is an environmentally friendly solution used for automotive interior applications including seat cushions, head restraints, arm rests, occupant protection components, trim cover laminates and composite board products such as overhead systems. BioFoam™ is a patented Woodbridge technology, a plant-based polyurethane foam solution to meet all required customer performance criteria. BioFoam™ technology offers



automakers solutions to help reduce their environmental footprint. BioFoam™ technology with renewable bio sources is a substitute for petroleum in the manufacturing of polyurethane products.

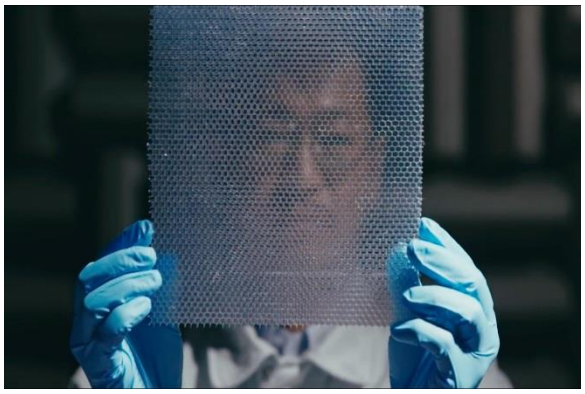
2. Liquid-Applied Sound-Deadening (LASD) Coatings

Liquid-applied sound-damping (LASD) technology enables OEMs to switch from traditional sound-damping technology, such as bitumen pads, to a thick-film coating with noise abatement functionality via a one-step spray application process. In addition to spray application, LASD technology can offer higher damping performance with less weight and less material waste compared to conventional polyurethane foam, asphaltic membranes, and viscoelastic materials. Liquid-applied sound-deadening coatings can be applied on substrates in difficult-to-reach areas and at various thicknesses for optimized acoustic performance. Built on water-based acrylic polymer technology, environmentally friendly LASD coatings reduce workers' exposure to harmful emissions and work well for any vehicle that can benefit from sound management. The coatings' versatility allows for strategic placement through spray application at varied thicknesses, enabling manufacturers to precisely target noise hot spots throughout the vehicle frame.

3. Acoustic Meta-Material for Sound Absorbing

As the world's automakers ramp up production of near-silent battery-powered cars, new technology is being developed to help eliminate road noise within the cabin, noise which is often amplified in vehicles with electrified or fully-electric powertrains. Without the sounds of an internal combustion engine to help drown out unwanted noise, drivers of fully-electric cars are often more aware of wind and tire noise, especially when traveling on a highway. To address

these concerns, Japan's Nissan Motor Co. has invented a new acoustic meta-material that can help keep vehicle interiors noise-free. Nissan's acoustic meta-material is a lightweight sound insulation material. It's designed using a lattice structure and plastic film engineered to control air vibrations in order to limit the transmission of wide-frequency band noise in the 500-1200 hertz frequency range. This frequency range includes typical road and engine noise from a moving vehicle.



4. Development of Fourth-Generation Blowing Agents

The polyurethane foam industry is moving into the fourth generation of blowing agents as a result of the Montreal Protocol's Kigali Amendment, which is a global effort to eliminate the use of the third-generation blowing agents, hydrofluorocarbons (HFCs), across all industries. The newly developed closed cell-blowing agent with hydrofluoric-olefins (HFOs) is used in foam insulation. These blowing agents have a lower carbon footprint than hydrofluorocarbons. The next-generation blowing agents enjoy better environmental performance with excellent general properties including insulation properties for rigid polyurethane foam.

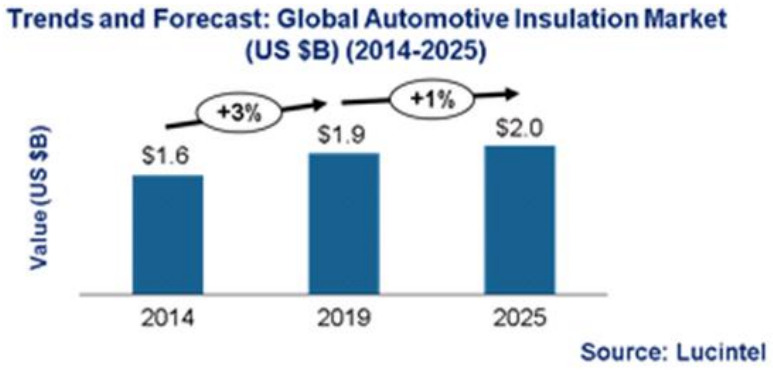
5. Glass Wool Insulation

Glass wool, also known as fiberglass, is considered one of the most effective and environmentally friendly insulation products. Its excellent thermal properties helps save

energy and lower environmental impact. Glass wool automotive insulation combines excellent acoustic and thermal efficiency with fire safety and mechanical durability. Glass wool products guarantee a strong barrier against heat loss to maintain the right temperature to optimize engine performance and lower CO_2 emissions. Once installed, these products act as thermal screens to protect vehicle parts from hot points. Glass wool provides excellent mechanical resistance and stability throughout the vehicle's lifetime, including resistance to both aging and vibration. Glass wool is used in engine covers, battery covers, firewalls, and other applications.

Strategic Considerations for Key Players in the Automotive Insulation Market

The automotive insulation industry is dynamic and ever-changing. Successful industry players are necessarily masters of innovation, change, and adaptation. To retain this status, they need to be attentive to current trends. We believe there will be promising opportunities for automotive insulation in the passenger car and light commercial vehicle market. As per Lucintel's latest market research report (Source: https://www.lucintel.com/automotive-insulation-market.aspx), the automotive insulation market is expected to grow with a CAGR of approx. 1.0% between 2020 and 2025, and reach $2.0 billion by 2025. This market is primarily driven by growth in automotive production and increasing demand for materials which provide high acoustic insulation and energy efficiency.



Whether you are new to the automotive insulation market or an experienced player, it is important to understand the trends that impact the development process, as these trends as listed above will lead players to create long-term strategy formulation that will allow them to remain competitive and successful in the long run. For example, to capture growth, some of the strategic considerations for players in the automotive insulation market are as follows:

- Automotive insulation market players can increase their capabilities to develop bio-based polyurethane foam to reduce the environmental footprint.
- Players can focus on development of acoustic meta-material that can help keep vehicle interiors noise-free, which is expected to lead future trends.
- Investment to increase competencies in the development of liquid-applied sound-damping coatings
- Research and development activities for development of low-cost automotive insulation

Note: In order to gain better understanding, and learn more about the scope, benefits, and companies researched, as well as other details in the automotive insulation market report from Lucintel, click on https://www.lucintel.com/automotive-insulation-market.aspx. This comprehensive report provides you in-depth analysis on market trends and forecast, segment analysis, regional analysis, competitive benchmarking, and company profiling of key players. In addition, we also offer **strategic growth consulting** to meet your customized needs. We have worked with many PE firms and corporate customers in the process of their market entry and M & A initiatives.

Lucintel - At a Glance

- **Premier management consulting and market research firm. Founded in 1998.**
- **Deep global insights into major industries. Team of over 120 analysts / consultants across globe**
- **Management comprised of PhDs, MBAs, and subject matter experts. Head quarter in Dallas, USA.**

Conducted 500+ consulting projects across industries for 3M, Audi, Dupont, Carlyle, GE, etc.

Consulting Services

Why Lucintel

Trusted insights: Reliable insights. Widely cited in Wall Street Journal, Financial Times, Forbes, etc.

Clients we serve: Over 1000 clients from 70 countries – Fortune 500 companies

Strategic advice: Over 20 years of proven global strategic management consulting experience

Industries Served

Contact Us

Sanjay Mazumdar, Ph.D.
CEO, Author, & Strategist
Email: sanjay.mazumdar@Lucintel.com
Tel.: 972-636-5056

Eric Dahl
Senior Executive Advisor
Email: eric.dahl@lucintel.com
Tel.: +1-323-388-6971

Brandon Fitzgerald
Director of Client Engagement
Email: brandon.fitzgerald@lucintel.com
Tel.: +1-303-775-0751

Sabonn Dammarell
Client Engagement Specialist
Email: sabonn.dammarell@lucintel.com
Tel.: +1-208-570-0101