

EMI Shielding Market worth \$12.11 billion by 2030, growing at a CAGR of 6.38% - Exclusive Report by 360iResearch

The Global EMI Shielding Market to grow from USD 7.38 billion in 2022 to USD 12.11 billion by 2030, at a CAGR of 6.38%.

PUNE, MAHARASHTRA, INDIA , December 6, 2023 /EINPresswire.com/ -- The "<u>EMI Shielding Market</u> by Material (Conductive Coatings & Paints, Conductive Polymers, EMI & EMC Filters), Method (Conduction, Radiation), Industry - Global Forecast 2023-2030" report has been added to 360iResearch.com's offering.

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Electromagnetic interference (EMI) shielding is a process of using materials and techniques to protect electronic devices and systems from the effects of electromagnetic interference. EMI is utilized when electromagnetic radiation is emitted by one electronic device and adversely affects the performance of another nearby electronic device. This interference can lead to degradation or disruption of signal integrity, malfunctions, or other undesirable effects. EMI shielding aims to prevent unwanted electromagnetic radiation from reaching sensitive components and to protect against external electromagnetic fields. The EMI shielding market is growing due to the increasing adoption of digital devices for high-shield performance and flexibility, rapid advancement in wireless technology, and the increased adoption of electronics in various sectors. Additionally, the utilization of EMI shielding films in automotive manufacturing and the adoption of EMI shielding for medical devices to prevent equipment failure fuel the market

growth. However, factors such as fluctuating costs of raw materials, high installation costs, and operational limitations of EMI shielding hinder market growth. The market has several opportunities, including increasing investments in 5G technologies and technological advancements and research and development (R&D) in EMI shielding films, which are expected to support the market growth in the coming years.

Material: EMI & EMC filters ensuring the proper functioning of electronic equipment Conductive coatings and paints are used extensively for EMI shielding applications across various industries, including electronics, automotive, aerospace, and telecommunications. These materials comprise a base material, usually epoxy, polyurethane, or acrylic, embedded with conductive elements such as silver, copper, nickel, or aluminum. Conductive polymers are emerging as a lightweight and flexible alternative to traditional EMI shielding materials and are witnessing increased adoption in consumer electronics, medical devices, and smart textiles. These materials work by dispersing conductive particles throughout a polymer matrix, endowing the material with the ability to attenuate electromagnetic waves. EMI (electromagnetic interference) and EMC (electromagnetic compatibility) filters are critical components in ensuring the proper functioning of electronic equipment in compliance with regulatory standards. These filters are designed to reduce the interference caused by both conducted and radiated electromagnetic noise. EMI shielding tapes and laminates are used to seal seams cable wrapping and provide shielded enclosures for various applications. These materials usually consist of metallic foils, conductive fabrics, or metalized textiles with adhesive backing. Their flexibility, relative ease of use, and customizable shapes and sizes make them especially suitable for quick fixes and prototyping. Other than this, springs, bands, enclosures, air vents, foam, and gaskets are a few EMI shielding materials that provide mechanical functionality, and effective electromagnetic shielding helps create comprehensive solutions for protecting electronic devices from electromagnetic interference.

Method: High utilization of conduction methods to prevent unwanted electromagnetic radiation

Shielding is a critical measure to prevent unwanted interference caused by electromagnetic radiation in electronic devices and systems, which involves two distinct techniques: conduction and radiation. Conduction is essentially the passage of electricity through a material, in this case, the EMI shield. Materials having free-charge carriers, such as metal, are good conductors of electricity. In EMI shielding, conduction is vital in grounding unwanted or excess electrical energy. Unlike conduction, which involves the physical passage of energy, radiation pertains to energy emission in the form of electromagnetic waves. In the context of EMI shielding, radiation primarily refers to the emission or absorption of electromagnetic waves by the shield, which helps counteract the impact of EMI. Conduction involves the direct transfer of energy using conductive materials; radiation involves the absorption and re-emission of energy in the form of electromagnetic waves. Conduction is more effective with low-frequency electromagnetic disturbances and directly grounded sources of interference, whereas radiation is most effective against high-frequency or broadcast sources of interference.

Industry: Significant adoption of EMI shielding in the automotive industry In the aerospace industry, electromagnetic interference (EMI) shielding is essential for providing the reliable operation of onboard systems necessary for navigation, communication, and aircraft control. Advanced materials and technologies are utilized to protect sensitive electronics from EMI, which can originate from a wide range of sources, including onboard equipment, external radar, and cosmic radiation. The automotive industry has observed a significant integration of electronic systems for enhanced performance, safety, and user experience. EMI shielding has become more pivotal with the rising demand and utilization of electric vehicles (EVs) and autonomous driving technologies, as shielding components protect against EMI in electronic control units (ECUs), infotainment systems, and sensor modules. Consumer electronics manufacturers are continually challenged by the need to ensure product functionality while operating near other electronic devices. EMI shielding plays a vital role in the reliability and performance of smartphones, tablets, PCs, and home appliances. EMI shielding is indispensable in the healthcare sector due to the essential nature of medical devices and equipment. The proper functioning of MRI machines, patient monitoring systems, electronic implants, and diagnostic devices is sensitive to EMI, which can result in malfunctions or data inaccuracies. Telecom and IT networks are the backbones of modern communication, and EMI shielding ensures data integrity and the uninterrupted operation of infrastructure. The need for EMI shielding solutions to prevent signal degradation and cross-talk is paramount with the rapid expansion of data centers and the deployment of 5G networks.

Regional Insights:

The Asia-Pacific region is the fastest-growing market for EMI shielding due to the rapid urbanization and industrialization in several countries in the region. The APAC region is witnessing a significant increase in the use of electronic devices, which has led to a surge in demand for EMI shielding materials and solutions. Moreover, the growing demand for 5G networks, IoT devices, and electric vehicles is expected to boost the demand for EMI shielding in the region. The Americas region provides a significant landscape to the EMI shielding market due to several major end-use industries such as aerospace & defense, healthcare, and telecommunications. The increasing need for consumer electronics, medical devices, and telecommunications equipment drives the market's growth in the region. Market vendors from Asia and the Middle East are expanding their businesses in South American countries for future growth opportunities. In EMEA, the increasing demand for high-performance electronic devices, growing awareness about the importance of EMI shielding, and several key market players in the region are boosting the market growth. Additionally, the market players in the region continue to work on R&D to enhance the performance of EMI shielding in the end-use industry.

FPNV Positioning Matrix:

The FPNV Positioning Matrix is essential for assessing the EMI Shielding Market. It provides a comprehensive evaluation of vendors by examining key metrics within Business Strategy and Product Satisfaction, allowing users to make informed decisions based on their specific needs. This advanced analysis then organizes these vendors into four distinct quadrants, which

represent varying levels of success: Forefront (F), Pathfinder (P), Niche (N), or Vital(V).

Market Share Analysis:

The Market Share Analysis offers an insightful look at the current state of vendors in the EMI Shielding Market. By comparing vendor contributions to overall revenue, customer base, and other key metrics, we can give companies a greater understanding of their performance and what they are up against when competing for market share. The analysis also sheds light on just how competitive any given sector is about accumulation, fragmentation dominance, and amalgamation traits over the base year period studied.

Key Company Profiles:

The report delves into recent significant developments in the EMI Shielding Market, highlighting leading vendors and their innovative profiles. These include 3M Company, Abrisa Technologies, Avery Dennison Corporation, Bal Seal Engineering, LLC by Kaman Corp., BASF SE, Boyd Corporation, Celanese Corporation, Daniels Manufacturing Corporation, Deep Coat Industries, Denver Rubber Company, DuPont de Nemours, Inc., EMP Shield Inc., ETS-Lindgren Inc., GEOMATEC Co., Ltd., Graphenest, S.A., Guangzhou Fang Bang Electronics Co., Ltd., Henkel AG & Co. KGaA, Holland Shielding Systems BV, Huntsman Corporation, Jinan EMI Shielding Technology Co. Ltd., Lamart Corporation, MADPCB, Meta Materials Inc., MG Chemicals, Mitsubishi Chemical Corporation, Modus Advanced, Inc., Murata Manufacturing Co., Ltd., NANOTECH ENERGY INC., NV Bekaert SA, OIKE & Co., Ltd., Omega Shielding Products, Inc., RTP Company, Saint-Gobain S.A., Saudi Basic Industries Corporation, Shenzhen HFC Co.,Ltd., Solvay S.A., STMicroelectronics International N.V., Stockwell Elastomerics, Inc., Tatsuta Electric Wire & Cable Co., Ltd., TE Connectivity Corporation, Tech Etch, Inc., TEXAS INSTRUMENTS INCORPORATED, and Toyo Ink SC Holdings Co., Ltd..

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Market Segmentation & Coverage:

This research report categorizes the EMI Shielding Market in order to forecast the revenues and analyze trends in each of following sub-markets:

Based on Material, market is studied across Conductive Coatings & Paints, Conductive Polymers, EMI & EMC Filters, and EMI Shielding Tapes & Laminates. The Conductive Coatings & Paints commanded largest market share of 32.34% in 2022, followed by EMI & EMC Filters.

Based on Method, market is studied across Conduction and Radiation. The Conduction commanded largest market share of 62.86% in 2022, followed by Radiation.

Based on Industry, market is studied across Aerospace, Automotive, Consumer Electronics, Healthcare, and Telecom & IT. The Aerospace commanded largest market share of 27.76% in 2022, followed by Healthcare.

Based on Region, market is studied across Americas, Asia-Pacific, and Europe, Middle East & Africa. The Americas is further studied across Argentina, Brazil, Canada, Mexico, and United States. The United States is further studied across California, Florida, Illinois, New York, Ohio, Pennsylvania, and Texas. The Asia-Pacific is further studied across Australia, China, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam. The Europe, Middle East & Africa is further studied across Denmark, Egypt, Finland, France, Germany, Israel, Italy, Netherlands, Nigeria, Norway, Poland, Qatar, Russia, Saudi Arabia, South Africa, Spain, Sweden, Switzerland, Turkey, United Arab Emirates, and United Kingdom. The Europe, Middle East & Africa commanded largest market share of 37.99% in 2022, followed by Americas.

Key Topics Covered:

- 1. Preface
- 2. Research Methodology
- 3. Executive Summary
- 4. Market Overview
- 5. Market Insights
- 6. EMI Shielding Market, by Material
- 7. EMI Shielding Market, by Method
- 8. EMI Shielding Market, by Industry
- 9. Americas EMI Shielding Market
- 10. Asia-Pacific EMI Shielding Market
- 11. Europe, Middle East & Africa EMI Shielding Market
- 12. Competitive Landscape
- 13. Competitive Portfolio
- 14. Appendix

The report provides insights on the following pointers:

1. Market Penetration: Provides comprehensive information on the market offered by the key players

2. Market Development: Provides in-depth information about lucrative emerging markets and analyzes penetration across mature segments of the markets

3. Market Diversification: Provides detailed information about new product launches, untapped geographies, recent developments, and investments

4. Competitive Assessment & Intelligence: Provides an exhaustive assessment of market shares, strategies, products, certification, regulatory approvals, patent landscape, and manufacturing capabilities of the leading players

5. Product Development & Innovation: Provides intelligent insights on future technologies, R&D activities, and breakthrough product developments

The report answers questions such as:

1. What is the market size and forecast of the EMI Shielding Market?

2. Which are the products/segments/applications/areas to invest in over the forecast period in the EMI Shielding Market?

3. What is the competitive strategic window for opportunities in the EMI Shielding Market?

4. What are the technology trends and regulatory frameworks in the EMI Shielding Market?

5. What is the market share of the leading vendors in the EMI Shielding Market?

6. What modes and strategic moves are considered suitable for entering the EMI Shielding Market?

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