

Conductive Silicone - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Conductive Silicone Market size is estimated at USD 7.88 billion in 2025, and is expected to reach USD 11.69 billion by 2030, at a CAGR of 8.22% during the forecast period (2025-2030).

The COVID-19 outbreak initially disrupted the conductive silicone supply chain. Later on, demand for electronics surged due to rapid digitization and the adoption of distance learning and remote work. Thus, the conductive silicone market readily recovered to its pre-pandemic stage.

Key Highlights

- The increasing demand for conductive silicone in electronic devices and its increasing usage in the solar industry are expected to raise the market demand for conductive silicone.
- On the other hand, the alternative to conductive silicone in EMI shielding is anticipated to restrain market growth during the forecast period.
- Advancements in medical device technology, such as microfluidic devices, are opening up new possibilities within the market.
- The Asia-Pacific region dominates the conductive silicone market, owing to rising demand from the automotive, electronics, and telecommunications industries.

Conductive Silicone Market Trends

Growth in the Electronics Segment to Augment the Demand

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- Conductive silicone is extensively used in electrical and electronics applications because of its superior properties such as electrical conductivity, thermal conductivity, flexibility, and corrosion resistance.
- The superior electrical conductivity associated with the use of conductive silicone makes it the ideal material for electric devices. Silicone's conductive particles enable the transfer of electrical current, making it useful for applications that require the transmission of signals, data, and power.
- China is the largest base for electronics production in the world. Electronic products such as smartphones, TVs, and other personal electronic devices recorded the highest growth in the electronics segment.
- The country has a large demand for electronic products. To benefit from this extensive demand, China has embarked on strategic initiatives like the "Made in China 2025" plan. Under this plan, the Chinese government has announced its goal to reach an output of USD 305 billion by 2030 and, therefore, meet 80% of its domestic demand. Moreover, China is an industrial hub for smartphone production, significantly boosting the demand for conductive silicone.
- According to the data released by the Japan Electronics and Information Technology Industries Association (JEITA), in 2022, the total production value of the electronics industry in Japan amounted to around JPY 11,124.3 billion (USD 84.34 billion), showcasing a rise of nearly 8% from the previous year.
- Germany has the largest electronic industry in Europe. The German market is Europe's largest and the world's fifth-largest electrical and electronics market. It had registered more than EUR 220 billion (USD 234.84 billion) in 2022, according to the Germany Electrical and Electronics Association.
- Electrical and electronic companies in Germany employ a workforce of more than 1.6 million at home and abroad. Also, 30% of all R&D employees in the country are working in the field of electronics and microtechnology.
- Additionally, electronics constitute up to 13% of the country's overall exports. The nominal exports of the German electro and digital industry witnessed an annual growth of 7.0% to reach EUR 19.0 billion (USD 20.93 billion) in April 2023. In the first four months of this year, the sector's aggregated deliveries abroad experienced a Y-o-Y growth of 10.7%, reaching a value of EUR 84.2 billion (USD 92.75 billion).
- As part of the France 2030 investment plan, the French government plans to invest nearly EUR 800 million (USD 880 million) to support the academic research ecosystem for the development of various electronic technologies by 2030.
- Therefore, the aforementioned factors are projected to boost the demand for conductive silicone in the near future.

Asia-Pacific to Dominate the Market

- The Asia-Pacific region stands to be the largest and fastest-growing market for conductive silicone. Factors such as the increasing utilization in the electronics, automotive, and power generation industries have been driving the demand for conductive silicone in Asia-Pacific.
- Countries in the region, such as China, India, Japan, Indonesia, and Vietnam, are witnessing increasing investments in power generation projects, boosting the growth of the conductive silicone market.
- The heightened significance of anti-static packaging for dust control during electric charge and sustaining functionality and longevity of electrical and electronic devices is anticipated to increase the utilization of conductive silicone in electronics. Asia is the largest producer of electrical and electronic devices, with countries like China, Japan, India, and ASEAN countries leading production.
- China is the most extensive base for electronics production in the world. Electronic products such as smartphones, TVs, and other personal devices recorded the highest growth.
- According to official data, in 2023, Huahong Group's Wuxi planned to build a 12-inch specialty process production line with a process grade covering 65/55-40 nm and a monthly production capacity of 83,000 pieces.
- Furthermore, Nexchip Semiconductor Corporation invested around USD 2.9 billion in 2023 in the 12-inch wafer manufacturing project.

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- Recently, China has been investing in various renewable energy projects due to the growing demand for energy in the country. In November 2023, the Government of China planned to install 230 GW of wind and solar capacity. The country invested a total of USD 140 billion in 2023 in various wind and solar projects with the aim of achieving its 2060 carbon-neutral target.
- The country has budgeted USD 455 billion in grid investments from 2021-2025, an increase of 60% from the previous decade. It also doubled its grid-connected energy storage capacity from 2020 to reach 67 GW in 2023.
- Hence, the factors mentioned above are expected to drive the demand for conductive silicone in the region during the forecast period.

Conductive Silicone Industry Overview

The conductive silicone market is consolidated in nature. The major players operating in the market (not in any particular order) include Wacker Chemie AG, DOW, Shin-Etsu Chemical Co. Ltd, Momentive, and Avantor Inc.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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