

Thermal Spray Market in 2029

The Business Research Company's Thermal Spray Global Market Report 2025 - Market Size, Trends, And Global Forecast 2025-2034

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/EINPresswire.com/ -- [Thermal Spray Market](#) to Surpass \$15 billion in 2029.

In comparison, the Speciality Chemicals market, which is considered as its parent market, is expected to be approximately \$973 billion by 2029, with Thermal Spray to represent around 1% of the parent market. Within the broader Chemicals industry, which is expected to be \$7,042 billion by 2029, the Thermal Spray market is estimated to account for nearly 0.2% of the total market value.



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Which Will Be the Biggest Region in the Thermal Spray Market in 2029

Asia Pacific will be [the largest region in the thermal spray market in 2029](#), valued at \$4,864 million. The market is expected to grow from \$3,371 million in 2024 at a compound annual growth rate (CAGR) of 8%. The strong growth can be attributed to the growing demand in healthcare equipment and the growth of the automotive industry.

Which Will Be The Largest Country In The Global Thermal Spray Market In 2029?

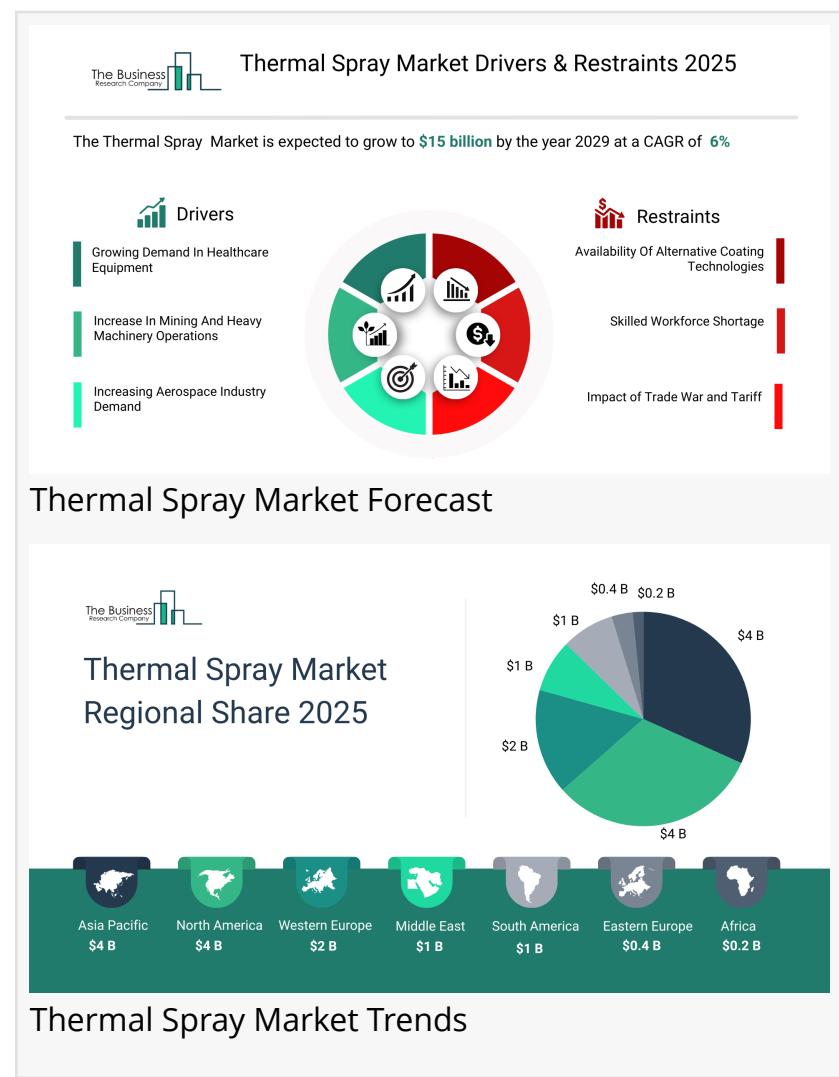
The USA will be the largest country in the thermal spray market in 2029, valued at \$3,974 million. The market is expected to grow from \$3,213 million in 2024 at a compound annual growth rate (CAGR) of 4%. The steady growth can be attributed to the increasing demand from aerospace and defense for high-performance coatings, rising adoption in the healthcare sector for medical implants, advancements in energy and power generation equipment and the push for sustainable and cost-efficient surface protection technologies.

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What will be Largest Segment in the Thermal Spray Market in 2029?

The thermal spray market is segmented by product type into coatings materials and thermal spray equipment. The coatings materials market will be [the largest segment of the thermal spray market](#) segmented by product type, accounting for 86% or \$12,846 million of the total in 2029. The coatings materials market will be supported by factors such as growing demand for corrosion and wear resistance, increasing adoption in aerospace, automotive and energy sectors, rising need for equipment longevity and efficiency and advancements in coating materials and application technologies.



The thermal spray market is segmented by technology into cold spray, flame spray and plasma spray. The cold spray market will be the largest segment of the thermal spray market segmented by technology, accounting for 45% or \$6,783 million of the total in 2029. The cold spray market will be supported by factors such as growing demand for low-temperature coating processes that preserve substrate properties, increasing use in aerospace, automotive and electronics industries, rising need for repair and restoration of critical components and advancements in cold spray technology for improved efficiency and precision.

The thermal spray market is segmented by end user industry into aerospace, industrial gas turbines, automotive, electronics, oil and gas, medical devices, energy and power and other end user industries. The aerospace market will be the largest segment of the thermal spray market segmented by end-user industry, accounting for 28% or \$4,247 million of the total in 2029. The aerospace market will be supported by factors such as the high demand for lightweight and durable components, the need for thermal, wear and corrosion-resistant coatings on turbine blades and airframes, stringent safety and performance standards and the continuous adoption of advanced coating technologies to enhance fuel efficiency and component lifespan.

What is the expected CAGR for the Thermal Spray Market leading up to 2029?

The expected CAGR for the thermal spray market leading up to 2029 is 6%.

What Will Be The Growth Driving Factors In The Global Thermal Spray Market In The Forecast Period?

The rapid growth of the global thermal spray market leading up to 2029 will be driven by the following key factors that are expected to reshape surface engineering, component durability, and advanced manufacturing processes worldwide.

Expansion Of Automotive Production - The expansion of automotive production will become a key driver of growth in the thermal spray market by 2029. As global vehicle manufacturing—particularly electric vehicle (EV) output—continues to expand, demand for high-performance surface treatments will grow to enhance component durability, thermal resistance and wear protection. Government-backed investments in EV battery manufacturing and infrastructure. Autonomous vehicle technologies, highlighting the opportunity for thermal spray coatings to play a central role in emerging EV manufacturing paradigms. As automakers ramp up production and update processes to meet evolving regulatory standards and performance requirements, the integration of thermal spray technologies into automotive manufacturing workflows becomes more essential, thereby propelling market expansion during the forecast period. As a result, the expansion of automotive production is anticipated to contributing to a 1.8% annual growth in the market.

Growing Demand In Healthcare Equipment - The growing demand in healthcare equipment will emerge as a major factor driving the expansion of the thermal spray market by 2029. The increasing need for advanced medical devices, driven by aging populations and rising chronic disease prevalence, is prompting substantial investments in durable and high-performance healthcare equipment. Healthcare providers are investing in sophisticated technologies such as diagnostic imaging systems, surgical instruments and patient monitoring tools, all of which benefit from enhanced surface engineering. Thermal spray coatings improve the wear resistance, corrosion protection, biocompatibility and sterilization durability of these devices, extending their performance and lifespan. As demand for medical equipment continues to climb, especially in hospital and home-care settings, thermal spray solutions become increasingly vital to meet stringent operational and regulatory requirements, thereby driving market growth during the forecast period. Consequently, the growing demand in healthcare equipment capabilities is projected to contributing to a 1.1% annual growth in the market.

Increase In Mining And Heavy Machinery Operations - The increase in mining and heavy machinery operations within digital manufacturing processes will serve as a key growth catalyst for the thermal spray market by 2029. As mining output and heavy equipment utilization expand globally, there is growing demand for surface protection technologies that extend equipment life and enhance performance under extreme conditions. Thermal spray coatings deliver highly durable wear and corrosion resistance, particularly valuable for parts like excavator buckets, crusher liners and conveyor components, supporting reduced downtime and maintenance. As mining and heavy machinery operations scale up, thermal spray becomes essential for

protecting critical surfaces exposed to abrasion, erosion and harsh operational environments, thereby driving market growth during the forecast period. Therefore, this increase in mining and heavy machinery operations across digital manufacturing operations is projected to support to a 0.8% annual growth in the market.

Increasing Aerospace Industry Demand - The increasing aerospace industry demand will become a significant driver contributing to the growth of the thermal spray market by 2029. Government-supported aviation data shows sustained and broadening demand in air travel. This robust and regionally diverse increase in aerospace activity escalates the need for advanced surface engineering solutions. Thermal spray coatings, valued for providing wear resistance, thermal protection and corrosion durability, are increasingly vital for protecting critical components such as engine parts, structural airframes, satellite hardware and launch systems. As countries and operators expand aerospace manufacturing, modernize fleets and explore space markets, thermal spray technologies become integral, thereby propelling market growth during the forecast period. Consequently, the increasing aerospace industry demand is projected to contributing to a 0.5% annual growth in the market.

Access the detailed Thermal Spray Market report here:

<https://www.thebusinessresearchcompany.com/report/thermal-spray-global-market-report>

What Are The Key Growth Opportunities In The Thermal Spray Market in 2029?

The most significant growth opportunities are anticipated in the thermal spray and coating materials market, thermal and cold spray coatings market, and aerospace thermal spray market. Collectively, these segments are projected to contribute over \$6 billion in market value by 2029, driven by increasing demand for high-performance surface protection, advancements in coating technologies, and the expanding need for wear-resistant, corrosion-resistant, and temperature-resistant components across industrial and aerospace applications. This surge reflects the accelerating adoption of thermal spray solutions that enhance component lifespan, improve operational efficiency, and deliver superior performance under extreme conditions, fuelling transformative growth within the broader thermal spray industry.

The thermal spray and coating materials market is projected to grow by \$3,185 million, thermal and cold spray coatings market by \$1,827 million, and the aerospace thermal spray market by \$1,083 million over the next five years from 2024 to 2029.

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The Business Research Company
Americas +1 310-496-7795
Europe +44 7882 955267
Asia & Others +44 7882 955267 & +91 8897263534
Email: info@tbrc.info

Oliver Guirdham
The Business Research Company
+44 7882 955267
info@tbrc.info
Visit us on social media:
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