

## Polycrystalline Diamond Market Projected Expansion to \$1.6+ Billion Market Value by 2032 with a 6.1% from 2023 to 2032

The automotive accounted for a dominating polycrystalline diamond market share in 2022 and is predicted to show the fastest growth in the upcoming years.

WILMINGTON, DE, UNITED STATES, August 5, 2025 /EINPresswire.com/ -- According to a new

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The polycrystalline diamond market was valued at \$900.60 million in 2022, and is estimated to reach \$1.6 billion by 2032, growing at a CAGR of 6.1% from 2023 to 2032."

Allied Market Research

report published by Allied Market Research, titled, "Polycrystalline Diamond Market," The polycrystalline diamond market was valued at \$900.60 million in 2022, and is estimated to reach \$1.6 billion by 2032, growing at a CAGR of 6.1% from 2023 to 2032.

Polycrystalline diamond (PCD) is diamond grit that has been fused together under high-pressure and hightemperature conditions in the presence of a catalytic metal. The extreme hardness, wear resistance, and thermal conductivity of diamond makes it an ideal material

for the cutting tools manufacturing. PCD is a man-made substance formed by fusing diamond grains under high pressure and heat.

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One of the primary reasons for polycrystalline diamond market demand rising popularity is its remarkable cutting and machining capabilities. PCD cutting tools are frequently considered the best option for machining difficult-to-machine materials such as composites, ceramics, and nonferrous metals, due to their exceptional hardness, wear resistance, and thermal conductivity. Another factor driving the demand for PCD is its long tool life. PCD cutting tools can outlast traditional cutting tools made of carbide or high-speed steel, reducing tool replacement time, and increasing production efficiency. PCD tools also generate less tool wear and generate less heat when cutting, lowering the risk of workpiece damage, and increasing dimensional accuracy. The increasing demand for high-precision machining and surface finishing in industries such as aerospace, automotive, and medical is driving up PCD utilization. Many precision machining applications require PCD equipment to provide high-quality surface finishes with minimal distortion and burrs. All these factors are projected to drive the market growth during the

forecast period.

Polycrystalline diamond is a somewhat costly material when compared to other cutting and drilling tools, which is predicted to limit its usage in some sectors. The high cost of initial investment is also expected to be a barrier for small and medium-sized firms or underdeveloped nations with limited financial resources. These factors might have an influence on the availability of raw materials and the capacity of businesses to do business in particular countries, which is expected to hinder the market polycrystalline diamond market size during the forecast period.

The use of polycrystalline diamond in construction of both residential and commercial buildings is steadily rising worldwide due to improving infrastructure and rising population. The widespread usage of marble and granite in the construction sector is likely the primary factor to create an excellent opportunity for the polycrystalline diamond market growth. The construction industry is driving the use of diamond tools owing to the exact size and thickness requirements of the granite stones used in the foundations of tall structures. These factors are anticipated to boost the market expansion in the upcoming years.

The polycrystalline diamond market share is segmented on the basis of type, application, and region. By type, it is classified into PCD milling tools, PCD turning tools, and others. By application, it is classified into automotive, machinery, aerospace, semiconductors, and others. By region, the market is analyzed across North America, Europe, Asia-Pacific, and LAMEA.

The key players profiled in the polycrystalline diamond market analysis report include Sandvik Group, Mapal Kennametal, Preziss Tool, Wirutex, Ceratizat, Sumitomo Electric, Kyocera, Mitsubishi Materials, and Union Tool.

The report offers a comprehensive analysis of the global polycrystalline diamond market trends by thoroughly studying different aspects of the market including major segments, market statistics, market dynamics, regional market outlook, investment opportunities, and top players working towards the growth of the market. The report also highlights the present scenario and upcoming trends & developments that are contributing toward the growth of the market. Moreover, restraints and challenges that hold power to obstruct the market growth are also profiled in the report along with the Porter's five forces analysis of the market to elucidate factors such as competitive landscape, bargaining power of buyers and suppliers, threats of new players, and emergence of substitutes in the market.

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Impact of COVID-19 on the Global Polycrystalline Diamond Industry

Sales of polycrystalline diamond are directly proportional to the demand from the automotive, aerospace, and semiconductor industries. However, various sectors such as automotive and aerospace were negatively impacted by the COVID-19 pandemic that affected the production

and demand for polycrystalline diamond due to disrupted supply chain.

The market suffered a significant drawback during the pandemic due to the halt of various industrial operations and manufacturing activities. However, as the globe recovers from the effects of the global health hazard, the market is projected to grow significantly during the post-pandemic period..

The worldwide crisis also created new opportunities for the use of polycrystalline diamond in industries including electrical products and medical care. For example, polycrystalline diamond is used in the manufacturing of electronic parts and healthcare equipment, both of which are in high demand as a result of the pandemic.

Key Findings of the Study

Based on type, the PCD milling tools sub-segment accounted for a dominating market share in 2022 and the PCD turning tools sub-segment is anticipated to be the fastest growing during the forecast period.

Based on application, the automotive sub-segment accounted for a dominating market share in 2022 and is predicted to show the fastest growth in the upcoming years.

Based on region, the Asia-Pacific market registered the highest market share in 2022 and is anticipated to show the fastest growth during the forecast period.

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