

Oxygen Free Copper Market worth \$33.44 billion by 2030, growing at a CAGR of 5.38% - Exclusive Report by 360iResearch

The Global Oxygen Free Copper Market to grow from USD 21.97 billion in 2022 to USD 33.44 billion by 2030, at a CAGR of 5.38%.

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EINPresswire.com/ -- The "[Oxygen Free Copper Market](#) by Grade (Cu-OF (Copper Oxygen-Free), Cu-OFE (Copper Oxygen-Free Electronic)), Product Type (Busbar, Plate, Rod), End-Use - Global Forecast 2023-2030" report has been added to 360iResearch.com's offering.



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Oxygen free copper (OFC) refers to the high-purity copper manufactured and processed under controlled conditions to reduce the presence of oxygen and other impurities. This results in copper with a minimum 99.95% purity level, offering superior electrical conductivity and enhanced thermal properties. High demand for electric vehicles and advanced consumer electronics has driven the need for high-quality components from materials such as OFC. However, high production costs associated with oxygen free copper can impede its widespread adoption across various industries looking to minimize operational expenses. Nevertheless, developing new applications of OFC in emerging industries, such as medical devices or defense technology, is expected to offer a broader scope for OFC market growth.

Grade: Increasing preference for Cu-OFE owing to its high purity levels

The Cu-OF grade, also known as Copper Oxygen-Free, is highly sought after in industries requiring high electrical and thermal conductivity. This grade of oxygen free copper possesses a minimum copper content of 99.95% and the highest oxygen content of 0.0010%. The need-based preference for this category arises from its superior mechanical properties, excellent workability, and resistance to hydrogen embrittlement. The Cu-OFE grade, or Copper Oxygen-Free Electronic, meets stringent requirements in applications where exceptional purity levels are crucial. It has a minimum copper content of 99.99% and an oxygen content not exceeding 0.0005%. It is used in ultra-high vacuum systems, superconductors, cryogenic applications, or sensitive electronic components such as semiconductor devices.

Product Type: Burgeoning utilization of plates due to its high thermal management properties
Busbars are solid conductors used for power distribution in various industries, such as electrical panels, switchgear systems, transformers, and circuit breakers. The need for high-quality conductors with low resistivity makes OFC busbars a preferred option over standard copper busbars. OFC plates find wide application in electronic components such as printed circuit boards (PCBs), connectors, antennas, and heat sinks due to their excellent thermal management properties. Industries such as telecommunications and renewable energy also rely on these plates for efficient power transmission. OFC rods are used in electrical wire and cable manufacturing, offering superior flexibility, improved conductivity, and corrosion resistance. These rods are also vital in producing medical equipment such as MRI coils and catheters. Oxygen free copper strips are deployed in transformers, capacitors, motors, and electromagnetic shielding applications due to their excellent electrical conductivity and malleability. OFC wires are essential components in audio and video cables, telecommunications equipment, and power transmission lines due to their low signal distortion and high electrical conductivity.

End-Use: Significant adoption of oxygen free copper in the electrical and electronics industry
Oxygen free copper is primarily used in manufacturing electrical wiring harnesses, connectors, and terminals for aircraft systems. Furthermore, OFC plays a vital role in reducing radio frequency interference that affects communication systems within aircraft. Oxygen free copper is a preferred material in the automotive sector due to its high electrical conductivity and corrosion resistance properties. Oxygen free copper is extensively utilized in manufacturing electric vehicle (EV) batteries, motors, high-voltage connectors, and charging infrastructure components. The electrical and electronics industry forms one of the most significant segments for oxygen free copper consumption. OFC is extensively employed in applications such as transformers, semiconductors, circuit boards, and connectors. In the marine industry, oxygen free copper is utilized for its corrosion resistance properties coupled with excellent electrical and thermal conduction capabilities. OFC is employed in manufacturing various marine components, including propulsion systems, power distribution units, underwater communication cables, and navigational equipment. Oxygen-free copper plays an essential role in the telecommunications sector due to its superior signal transmission capability compared to standard copper grades.

Regional Insights:

The oxygen-free copper market is evolving in the Americas owing to the significant penetration

of electrical and electronic industries and considerable investment from government and private sectors in research and development activities. The presence of major industries across the EU, such as automotive, renewable energy, and telecommunications, contributes to increased consumption of oxygen-free copper. Strict adherence to environmental regulations has further triggered demand for efficient materials, including OFC, in manufacturing processes. Additionally, ongoing collaborations between institutions across Europe are fostering innovation and technological advancements related to oxygen-free copper applications. The Middle East and Africa are experiencing a growing adoption of renewable energy technologies that utilize oxygen-free copper due to their high thermal conductivity. Government initiatives promoting sustainable energy generation contribute to the rising demand for OFC in this region. Furthermore, infrastructure development projects across EMEA countries lead to increased consumption of OFC in construction-related applications. In the Asia Pacific (APAC) region, large-scale manufacturing capabilities coupled with abundant raw material availability are encouraging the growth of the OFC market in the region. Besides, ongoing advancements and research to expand applications of OFCs are anticipated to propel the growth of the oxygen-free copper market globally.

FPNV Positioning Matrix:

The FPNV Positioning Matrix is essential for assessing the Oxygen Free Copper 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 Oxygen Free Copper 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 Oxygen Free Copper Market, highlighting leading vendors and their innovative profiles. These include Alfa Aesar, by Thermo Fisher Scientific Inc., Aurubis Olen nv, Aviva Metals Inc., Citizen Metalloys Ltd., COPPRROD Industries Pvt. Ltd., Cupori Oy, Farmer's Copper Ltd, Furukawa Electric Co. Ltd., Hitachi Metals Neomaterial Ltd., Indian Copper, Italchimici SpA, JX Nippon Mining and Metals Corp., KGHM Polska Miedz SA, KME Germany GmbH, Krishna Copper Private Limited, Lark Non-Ferrous Metals Ltd., Lester Metals LLC, Metalminotti Srl, Mitsubishi Materials Corporation, NSRW, Inc., RK Copper

& Alloy LLP, Sagar Deep Alloys Ltd., Sequoia Brass & Copper Inc., Tamra, and Tranect Ltd..

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Market Segmentation & Coverage:

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

Based on Grade, market is studied across Cu-OF (Copper Oxygen-Free) and Cu-OFE (Copper Oxygen-Free Electronic). The Cu-OFE (Copper Oxygen-Free Electronic) is projected to witness significant market share during forecast period.

Based on Product Type, market is studied across Busbar, Plate, Rod, Strip, and Wire. The Rod is projected to witness significant market share during forecast period.

Based on End-Use, market is studied across Aerospace & Aviation, Automotive, Electrical & Electronics, Marine, and Telecommunications. The Telecommunications is projected to witness significant market share during forecast period.

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 36.27% in 2022, followed by Asia-Pacific.

Key Topics Covered:

1. Preface
2. Research Methodology
3. Executive Summary
4. Market Overview
5. Market Insights
6. Oxygen Free Copper Market, by Grade
7. Oxygen Free Copper Market, by Product Type
8. Oxygen Free Copper Market, by End-Use
9. Americas Oxygen Free Copper Market

10. Asia-Pacific Oxygen Free Copper Market
11. Europe, Middle East & Africa Oxygen Free Copper 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 Oxygen Free Copper Market?
2. Which are the products/segments/applications/areas to invest in over the forecast period in the Oxygen Free Copper Market?
3. What is the competitive strategic window for opportunities in the Oxygen Free Copper Market?
4. What are the technology trends and regulatory frameworks in the Oxygen Free Copper Market?
5. What is the market share of the leading vendors in the Oxygen Free Copper Market?
6. What modes and strategic moves are considered suitable for entering the Oxygen Free Copper Market?

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