

TECHCET

Electronics Materials Information



2023 - 2024

CRITICAL MATERIALS REPORT™

SPUTTERING TARGETS

SUPPLY-CHAIN & MARKET ANALYSIS

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RESEARCH METHODOLOGY

TEHCET employs subject matter experts having first-hand experience within the industries which they analyze. Most of TEHCET's analysts have over 25 years of direct and relevant experience in their field. Our analysts survey the commercial and technical staff of IC manufacturers and their suppliers, and conduct extensive research of literature and commerce statistics to ascertain the current and future market environment and global supply risks. Combining this data with TEHCET's proprietary, quantitative wafer forecast results in a viable long-term market forecast for a variety of process materials.

READER'S NOTE

This report represents the interpretation and analysis of information generally available to the public or released by responsible agencies or individuals. Data was obtained from sources considered reliable. However, accuracy or completeness is not guaranteed.



ANALYST BIOGRAPHY

- Sr. Director of Market Research, TECHCET
- Covers silicon wafers, packaging materials, sputtering targets and deposition materials,
- Has over 20 years of experience in the electronics industry covering supply-chain topics related to semiconductor packaging, thin films, semiconductor process equipment, and semiconductor materials.
- Previously was the senior director of the Industry Research & Statistics group at SEMI.
- Worked for Rose Associates covering electronic materials, and for National Semiconductor as a Packaging Engineer.
- Holds a Ph.D. in Materials Engineering from Rensselaer Polytechnic Institute.



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FURUYA METAL CO
GO ELEMENT
GRIKIN
HONEYWELL
HUIZHOU TOP METAL
MATERIAL (TOPM)
...and 15+ more

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SCOPE, PURPOSE AND METHODOLOGY

2.1 SCOPE

- This report covers the sputtering targets and supply-chain for key metals used in semiconductor device fabrication. The report contains data and analysis from TECHCET's data base and Sr. Analyst experience, as well as that developed from primary and secondary market research. For more information on TECHCET Critical materials Reports™ please go to <https://TEHCET.com>
- Target demand forecast is reported in terms of revenue growth, segmented and modeled by 200mm and 300mm target sizes.
- An absolute count of the number of sputtering targets is not included in this analysis for the following reasons:
 - The variety of sputtering target configurations employed by the semiconductor industry (i.e. "standard" planar targets, extended use targets, monolithic targets, and HCM's)
 - The target utilization (i.e. fraction of materials sputtered from a target) varies based on target configuration and process conditions)
 - The introduction of alloys to improve RC Delay problems , reduce defects and improve electro-migration.

2.2 PURPOSE

- This report covers the sputtering targets and supply-chain for key metals used in semiconductor device fabrication. The report contains data and analysis from TECHCET's data base and Sr. Analyst experience, as well as that developed from primary and secondary market research. For more information on TECHCET Critical materials Reports™ please go to <https://techcet.com>
- Sputtering targets are a critical in semiconductor manufacturing as sputtering allows the deposition of different materials to form interconnects, barriers layers, and other films for semiconductor devices, MEMS, and sensors.

2.3 METHODOLOGY

- TECHCET employs subject matter experts having first-hand experience within the industries which they analyze. Most of TECHCET's analysts have over 25 years of direct and relevant experience in their field. Our analysts survey the commercial and technical staff of IC manufacturers and their suppliers and conduct extensive research of literature and commerce statistics to ascertain the current and future market environment and global supply risks. Combining this data with TECHCET's proprietary, quantitative wafer forecast results in a viable long-term market forecast for a variety of process materials.

2.4 OVERVIEW OF OTHER TECHCET CMR™ REPORTS

- TEHCET produces electronic material supply chain reports each year as one of its functions for the Critical Materials Council. Reports to be published in 2022 can be found at www.techcet.com and are listed in the table below:

TEHCET's Critical Materials Reports™	
1	CMP Consumables (Pads & Slurry)
2	CMP Equipment Ancillaries (Conditioners, Filters, etc.)
3	CVD /ALD Hi K Precursors
4	CVD DIELECTRIC Precursors
5	Equipment Components – Quartz
6	Equipment Components – Silicon
7	Equipment Components – SiC/Ceramics
8	Gases - Electronic Specialty, Bulk & Rare Gases
9	Metal Plating Chemicals
10	Photoresists, Ancillaries & Extension Materials
11	Sputtering Targets
12	Wafers: Silicon, SOI
13	SiC Wafers & Manufacturing
14	Wet Chemicals / Specialty Cleans