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TANAKA PRECIOUS METALS

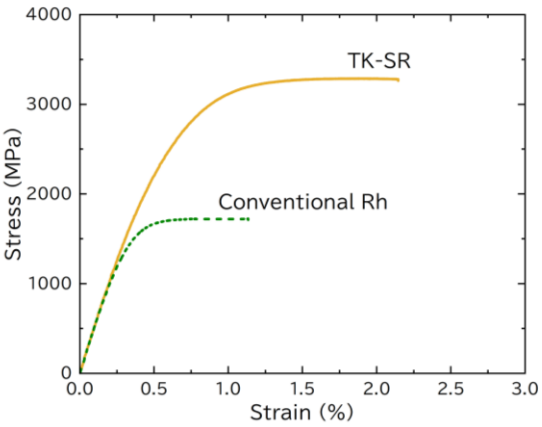
PRESS RELEASE

TANAKA PRECIOUS METAL TECHNOLOGIES Announces TK-SR Rhodium Material for Use in Probe Pins

The world's first rhodium material to simultaneously offer high strength, elasticity hardness, and electrical conductivity

Tokyo, Japan, Nov. 12, 2025 - TANAKA PRECIOUS METAL TECHNOLOGIES Co., Ltd., an industrial precious metals organization, has announced the development of TK-SR, a rhodium (Rh) material for probe pins used in probe cards during the front-end processes of semiconductor package manufacturing. This first of its kind product will be exhibited on display at Booth 506 and panel displays at SWTest Asia 2025 from November 20 to November 21 in Fukuoka, Japan.

"TK-SR" product image



Comparison of stress-strain curve for probe Rh and conventional TANAKA Rh

TANAKA manufactures and supplies various precious metal probe pin materials for the inspection equipment used in the front- and back-end processes of semiconductor manufacturing. Using its proprietary processing technologies, TANAKA is the first company in the world to successfully develop a rhodium probe pin material that simultaneously offers high strength, elasticity, hardness, and electrical conductivity that will extend the lifespans of probe cards and lower their costs.

TK-SR is available in widths as narrow as 18 μm, enabling precision inspection for today's increasingly compact narrow-pitch semiconductor packages. TANAKA plans to ship twice as many of these products as conventional products by 2030.

Probe cards play a critical role in current-carrying tests on silicon wafers during front-end semiconductor processes, using thousands or sometimes tens of thousands of precision probe pins. These pins endure extremely light loads applied hundreds of thousands, or even millions, of times. If a single probe pin bends or breaks, it must be replaced, and in some cases, the entire probe card. That's why durability

is essential. TANAKA's high-strength, high-elastic limit TK-SR significantly reduces the risk of deformation and breakage, minimizing replacement frequency and improving overall reliability.

TK-SR Product Performance (reference values)

Properties	TK-SR
Material	Rh (min. 99.9%)
Wire diameter range(mm)	0.018～0.300
Melting point(℃)	1960
Density(g/cm^3)	12.4

Comparison of TK-SR and Convention Rh Wire Properties

Property	TK-SR (As Drawn)		Conventional Rh wire
Wire diameter [mm]	0.018	0.150	0.150
UTS [MPa]	3860	2478	1912
Elastic limit [MPa]	1210	1122	860
Breaking elongation [%]	2.72	2.46	1.42
Vickers hardness [HV]	620	543	499
Specific resistance [μΩ·cm]	6.6	6.3	5.4

Exhibition Details

■ Exhibition Name: SWTest Asia 2025

■ Dates and Times: November 20 to November 21, 2025, 8:00 a.m. to 5:00 p.m.

■ Location: Hilton Fukuoka Sea Hawk (Fukuoka, Japan)

■ Website: https://www.swtestasia.org/

■ Exhibitor: TANAKA PRECIOUS METAL TECHNOLOGIES Co., Ltd.

■ Booth No.: 506

■ Panel Contents: **TK-SR (wire) rhodium material for probe pins,** TK-FS (wire, plate), TK-SK (wire), palladium alloy material for probe pins, TK-101 (plate) copper and silver alloy material for probe pins, and plating solution for probe pins (various types)

To learn more about TANAKA's probe pin offerings and contributions to the semiconductor market, visit: https://tanaka-preciousmetals.com/en/products/detail/probe-pins/

■ **About TANAKA**

Since its foundation in 1885, TANAKA has built a portfolio of products to support a diversified range of business uses focused on precious metals. TANAKA is a leader in Japan regarding the volume of precious metals it handles. Over many years, TANAKA has manufactured and sold precious metal products for industry and provided precious metals in such forms as jewelry and assets. As precious metals specialists, all Group companies in Japan and worldwide collaborate on manufacturing, sales, and technology development to offer a full range of products and services. With 5,591 employees, the group's consolidated net sales for the fiscal year ended December 2024 were 846.9 billion yen.

■ TANAKA Industrial Precious Metal Materials Portal
https://tanaka-preciousmetals.com

■ Product inquiries
TANAKA PRECIOUS METAL TECHNOLOGIES Co., Ltd.
https://tanaka-preciousmetals.com/en/inquiries-on-industrial-products/

■ Press inquiries
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