



Advanced Cleaning Materials

Your Expert in
Probe Card Cleaning

Dual Action MEMS Cleaning Technology for Improved Performance and Reliability

At Entegris, we are proud to lead the way in probe card cleaning innovation with our advanced cleaning materials. Our solutions feature advanced cleaning technology, ensuring the gentle and efficient removal of particles and residues from probe cards. These cutting-edge materials restore the integrity of the card's contact points, leading to precise and reliable test results.

Our latest Dual Action MEMS cleaning material delivers unparalleled cleaning of MEMS probe cards, extending probe card lifetime and improving test performance. Dual Action MEMS offers reduced overall cost of test and probe card spend through decreased wear and improved cleaning compared to legacy and competing products.

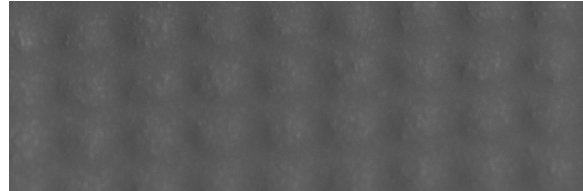
PRODUCT OVERVIEW

Dual Action MEMS is Entegris' latest innovation for MEMS probe card technologies. It offers a single, in-line cleaning solution to address persistent challenges for MEMS cards such as debris transfer, probe card lifetime, and card misalignment caused by debris accumulation at the base of the pin.

Dual Action MEMS delivers improved cleaning efficiency, reduced pin tip wear, and extended probe card lifetime compared to conventional cleaning methods. This material reduces probe card downtime, improves yield and contact resistance stability, and decreases overall cost of ownership for MEMS probe cards.

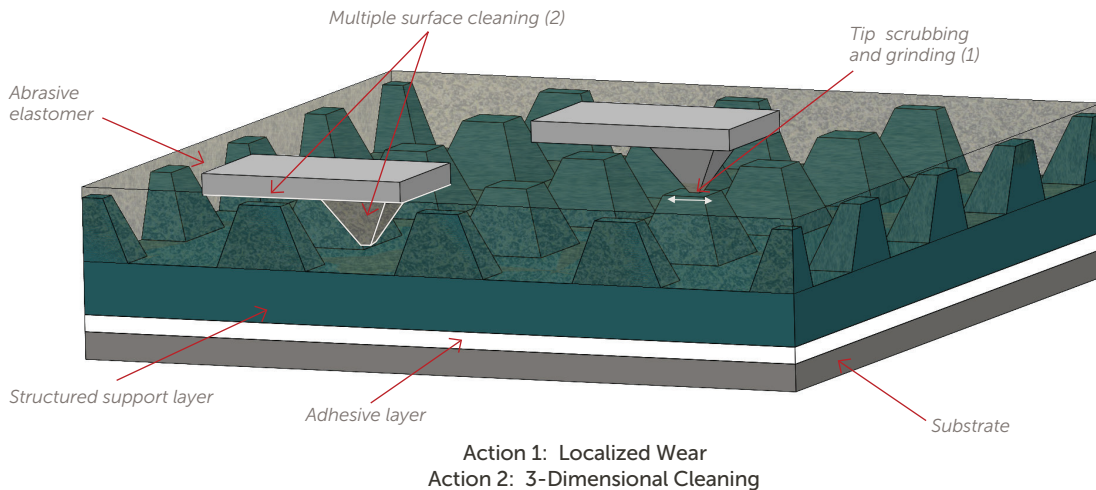
Qualification results demonstrate up to a 35% reduction in probe card re-order spend and technician offline cleaning cost, with a 12% reduction in overall cost of test.

DUAL ACTION MEMS CLEANING SURFACE



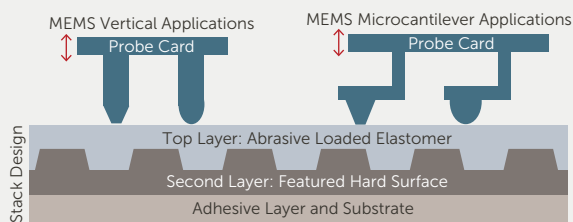
Dual Action MEMS cleaning surface, 600X magnification. Structured cleaning surface allows for 3-D cleaning of complex MEMS pins, with tip scrubbing and grinding alongside full surface cleaning and debris removal.

DUAL ACTION CLEANING MECHANISM

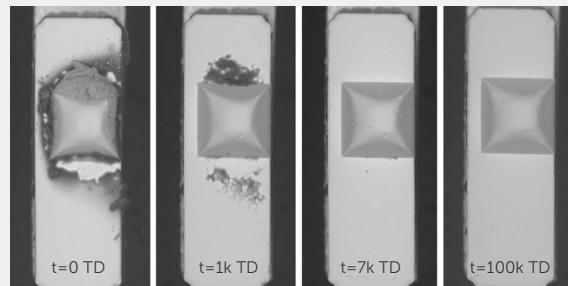


Dual Action MEMS provides localized tip scrubbing and 3-D cleaning of pin tip surfaces.

DUAL ACTION MEMS APPLICATIONS



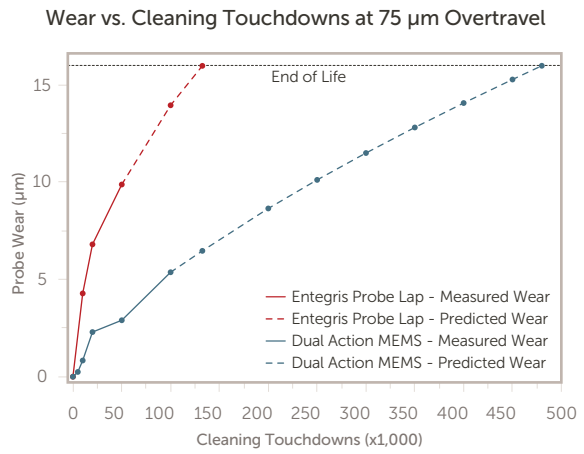
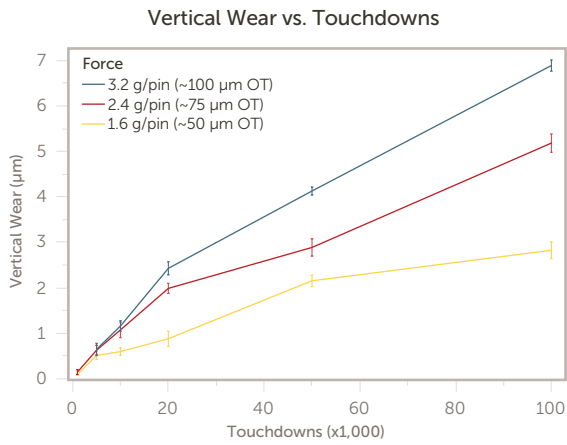
Dual Action MEMS applications include MEMS vertical and microcantilever probe cards with shaped pin and spring tips.



Dual Action MEMS restores unusable MEMS springs to functionality through removal of debris, improving card alignment and extending probe card lifetime. Additionally, extended cleaning tests show no introduction of new debris from the cleaning material.

Cleaning conditions: 2.4g/spring (approx. 75 μ m overtravel), 25°C

Left: 0 cleaning touchdowns; Middle Left: 1k cleaning touchdowns; Middle Right: 7k cleaning touchdowns; Right: 100k cleaning touchdowns



Dual Action MEMS vertical wear with cleaning overtravel (left) and compared to probe lap control (right). Dual Action MEMS provides reduced vertical wear, extending probe card lifetime compared to standard Probe Lap processes.

PRODUCT OFFERINGS

Dual Action MEMS is suitable for use from -40 to 150°C and is available as cut parts and wafers. Evaluations are ongoing for material use of up to 175°C.

Custom part sizes available upon request.

MATERIAL	PART NUMBER	DESCRIPTION
Dual Action MEMS	RNPDA-70AA-0015A0	DA,MEMS,300MM WAFER
Dual Action MEMS	RNPDA-70AA-0068	DA,MEMS,150MM SQUARE

THE ENTEGRIS ADVANCED CLEANING MATERIALS ADVANTAGE

With Entegris' advanced cleaning materials, you can trust in superior performance, enhanced durability, and reduced operational costs to keep your operations running at peak efficiency. Our precision cleaning solutions offer tailored, user-defined maintenance for probe cards ensuring consistent and reliable connections, extended probe card lifespan, reduced downtime, and cost savings, all while enhancing your quality control and test accuracy.

Whether it's routine maintenance or specialized cleaning needs, our solutions are tailored for all types of probe card cleaning applications, ensuring your testing processes are always at their best.



LEARN MORE

No other company has both the expertise and experience to provide transformative new solutions for your processes. For more information, please contact [customer service](#).



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