



Microclean® Eclipse® PVA brushes

State-of-the-art PVA brushes
for post-CMP critical cleaning

- Copper/low-k
- Sub 65nm
- Rigid disk media

The Eclipse PVA brushes build on the industry standard and include technology advancements to improve performance and convenience for the next generation of post-CMP cleaning.

Eclipse—The Next Generation Material in PVA

PVA is the material of choice for post-CMP cleaning, and Rippey has provided the best PVA brushes for more than 25 years.

Eclipse PVA features new attributes that advance the technology for post-CMP cleaning:

Softer structure

- Increased surface coverage and cleaning efficiency
- Lower shear for porous and other soft surfaces

Stronger polymer

- Higher tensile strength for longer brush life
- Consistent cleaning throughout brush life

More elastic

- Nodules clean and recover consistently
- Less hysteresis reduces nodule breakdown and extends brush life
- More consistent torque as measured on the Applied Material Reflexion LK

Cleaner brush

- Order-of-magnitude fewer releasable particles
- The industry standard for lowest level of ionic impurities

Rippey engineered the Eclipse PVA for the most critical CMP applications: copper/low-k, sub-65nm and disk media.

New Flow-Through Cleaning Technology

The flow-through process combines the established excellence of the Microclean process with new technology to provide more value in use.

Rippey developed and patented the Microclean process for brush purification in the 1990s. It is an excellent purification process and is unsurpassed for the removal of residual metal ions.

Microclean the raw brushes

- Industry standard for the cleanest brushes
- Extraordinarily low levels of residual metal ions

Flow-through process

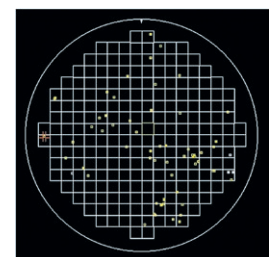
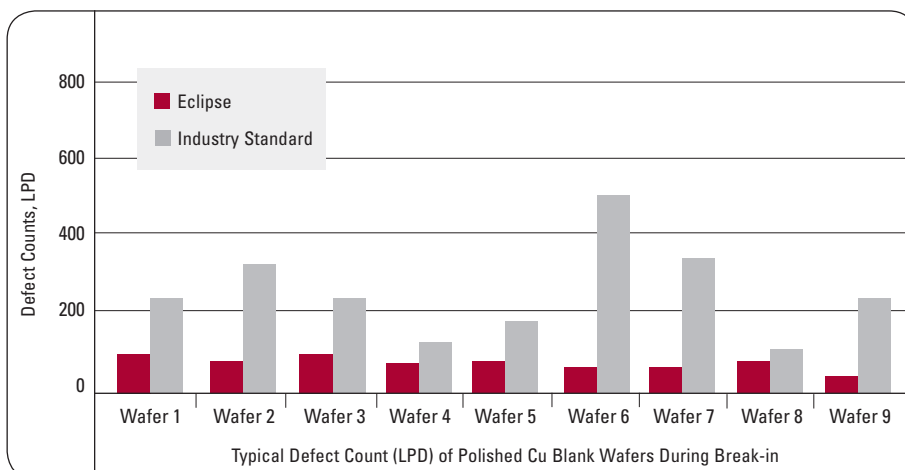
- Brushes pre-mounted on mandrel for flow-through cleaning
- Unidirectional flow of cleaning solution from the core to the brush's outer surface
- Order-of-magnitude reduction in releasable particles

Brush conditioning

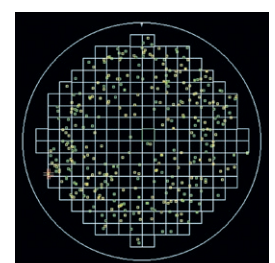
- The brush nodules become conditioned similar to in-process break-in
- Process engineers can significantly reduce break-in time on their tools

The Microclean Flow-Through process creates the purest PVA brush for post-CMP cleaning and reduces break-in time on the tool.

Eclipse Brush Cleaning Performance Break in Efficiency



Eclipse



Industry Standard

Engineering Convenience and Time Savings

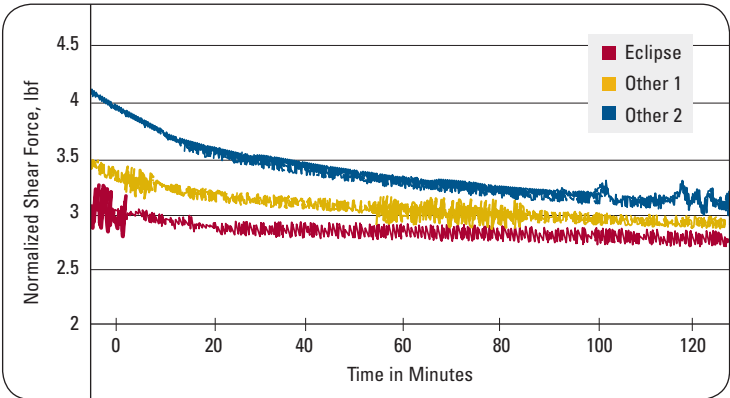
The optimal configuration for Eclipse PVA brushes is pre-mounted on disposable mandrels. Pre-mounted brushes save time and effort in removing used brushes and mounting new brushes on the OEM-supplied mandrels. These convenient assemblies also reduce the potential for contamination in handling the brushes, brush damage and misalignment during the mounting process.

Ripsey designed a new package for the Eclipse pre-mounted brush. This two-part package supports and protects the brush in transit, eliminates brush contact with packaging and reduces handling contact with the brush.

Availability

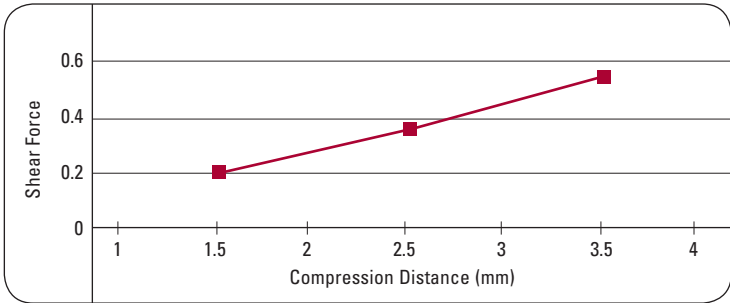
Eclipse brushes are currently available for Applied Materials and Ebara tools.

Shear Force vs Time



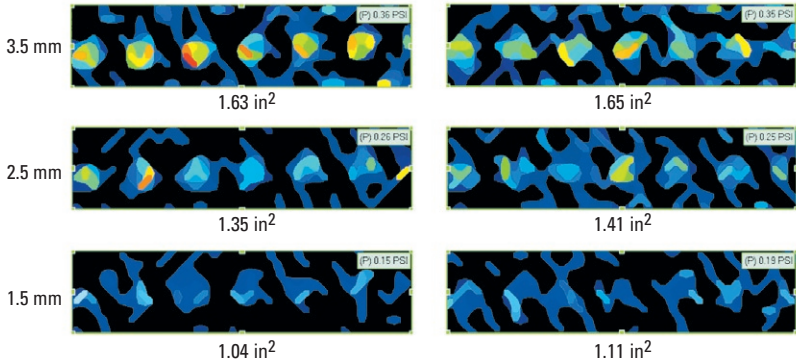
- Eclipse Brush displays excellent stability of shear force over time
- Consistent shear force (or torque) by the brush on the wafer surface produces more consistent cleaning throughout the brush life.

Shear Force | Eclipse Brush



- Excellent linear response of shear force to brush gap adjustment
- Uniform brush wafer contact pressure across the brush surface

Contact pressure contour maps | Eclipse Brush



ITW Rippey has product support facilities in the United States, Asia and Europe to meet the needs of our worldwide customers. Our global distributors provide local consultation and technical support for your manufacturing operation.



If you have questions regarding Rippey Microclean Eclipse, please contact our customer service at 916.939.4332. Samples available upon request. www.rippy.com

For more information on ITW Rippey product lines, please visit our Web site at www.rippy.com.



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