



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

MATERION BRUSH INC.<sup>1</sup>  
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Elmore, OH 43416-9502  
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MECHANICAL

Valid To: December 31, 2012

Certificate Number: 0339.03

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following physical tests on metals and alloys – (beryllium metal, aluminum – beryllium metal, beryllium – containing alloys, and copper and copper alloys):

<u>Technology</u>	<u>Test Method(s)*</u>
Bend Test (90°)	BW-ELM-ML-0986
Charpy Impact Test	ASTM E23
Hardness	
Brinell Hardness (3000 Kg)	ASTM E10
Vickers Hardness Testing (HV1, HV2, HV10)	ASTM E384
Rockwell Hardness Testing (B & C)	ASTM E18
Precision Elastic Limit	BW-ELM-MT-0104
Scroll Test	Tyco 109-32F
Solderability Test	BW-ELM-ML-0983
Tensile Testing of Be Microbars, High-Be Sheets, BeCu Bars and BeCu Strip Bars, Preparation of Tensile Specimens and Stress-Stain Curve Interpretation (70 to 1200) °F	ASTM E8, E21
Thermal Expansion	ASTM E289; BW-ELM-MT-0103
<u>Metallographic Evaluation</u>	
Grain Size	
Characterizing Duplex Grain Size	ASTM E1181
Estimating the Largest Grain Observed in a Metallographic Section (ALA Grain Size)	ASTM E930
Grain Size by Linear (HEYN) Intercept	ASTM E112
Macroetching Using HNO <sub>3</sub> Acid	ASTM E340; BW-ELM-ML-0647
Preparation of Be Metal Metallographic Test Specimens	BW-ELM-ML-0693
<u>Electrical Analysis</u>	
Conductivity Measurement Using the Auto Sigma 3000 - Conductivity Meter	ASTM 1004
Conductivity Measurement Using the Kelvin Bridge	ASTM B193

\* Those methods designated as BW-ELM-ML are internal test methods.

Technology

Test Method(s)\*

Nondestructive Testing

Magnetic Permeability of BeCu Specimens

BS EN 5884

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**<sup>1</sup> This accreditation covers testing performed at the main laboratory listed above, and the following satellite laboratory listed below.**

WARREN SERVICES TESTING LABORATORY  
27555 College Park Drive  
Warren, MI 48093

Technology

Test Methods

Rockwell Hardness Testing (B & C)

ASTM E18





The American Association for Laboratory Accreditation

World Class Accreditation

# Accredited Laboratory

A2LA has accredited

**MATERION BRUSH INC.**

*Elmore, OH*

for technical competence in the field of

**Mechanical Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009*).

Presented this 2<sup>nd</sup> day of May 2011.

A handwritten signature in black ink, reading "Peter Abney".

President & CEO

For the Accreditation Council

Certificate Number 0339.03

Valid to December 31, 2012



*For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Mechanical Scope of Accreditation.*