



## CALIBRATION CERTIFICATE

This calibration certificate is solely for the following Troxler Secondary Calibration Block:

<u>Block Material</u>	<u>Block Serial No.</u>	<u>Block Density (kg. per cubic meters)</u>	<u>Date of Calibration</u>	<u>Recommended Date for Next Calibration</u>
Aluminum	320	2711.4	July 28, 2009	July 28, 2014

This Secondary Calibration Block was found to be mechanically sound and compliant with the conditions specified in the applicable Troxler Technical Drawing(s). Special conditions and limitations of use are specified in Troxler Drawing A-106513.

This secondary block was measured using the following Master Gauge:

<u>Gauge Model No.</u>	<u>Gauge Serial No.</u>	<u>Date of Calibration</u>	<u>Due for Recalibration</u>
3440	39216	March 18, 2009	September 18, 2009

The preceding Master Gauge was calibrated using an extended high-precision measurement and evaluation procedure on the Troxler Primary Density Calibration Blocks. These blocks have the following properties:

<u>Block Material</u>	<u>Block Serial No.</u>	<u>Block Density (kg. per cubic meters)</u>	<u>Date of Manufacture</u>	<u>Date of Expiration</u>
Magnesium	318	1777.67	September 22, 2004	September 22, 2009
Mag/Aluminum	316	2205.22	September 22, 2004	September 22, 2009
Aluminum	319	2700.19	September 22, 2004	September 22, 2009

**Traceability Statement:** The Troxler Primary Density Standard Blocks were measured using instruments with measurement results and standards with values that are traceable to the National Institute of Standards and Technology (NIST), USA. Testing, measurement, and quality control values and procedures, and supporting documentation, are on file and available for inspection upon request.

**Uncertainty Statement:** Density and moisture uncertainties, and the uncertainties of all relevant quantities used in the calculation of densities and moistures, are computed according to NIST Technical Note 1297, "Guidelines for Evaluation and Expressing the Uncertainty of NIST Measurement Results." Troxler Electronic Laboratories certifies that the expanded uncertainty in the density reported for the Secondary Calibration Block described in this report is less than 0.2 percent of the block density, where the coverage factor  $k = 2$ . This expanded uncertainty is compliant with ASTM D6938, Section A1.1.1.

**Date:** August 6, 2009

Marvin Wright, Signatory

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Magnesium	322	1779.3	July 28, 2009	July 28, 2014

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