

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

TESTING MACHINES, INC. FIELD SERVICE DEPARTMENT  
 40 McCullough Drive  
 New Castle, DE 19720  
 Richard Demers Phone: 800 678 3221 x124

CALIBRATION

Valid To: December 31, 2011

Certificate Number: 2091.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations<sup>1</sup>:

I. Dimensional

Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Micrometers <sup>3</sup> –			
Imperial	(10 to 50) mil	0.13 mil	ISO 534, EN ISO 12525-3, TAPPI T411
Metric	(0.254 to 1.272) mm	0.001 mm	FCI/497000

II. Mechanical

Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Tear Testers <sup>3</sup> –			
Pendulum	(0 to 4000) mN	18 mN	ISO 1974, TAPPI T414, ASTM D1922, D1424
Cut Depth	(0 to 25) mm	0.15 mm	FCI/831100



Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Canadian Standard Freeness Tester <sup>3</sup> –			
Dimension	(0 to 60) mm (0 to 300) mm	0.07 mm 0.09 mm	ISO 5267-2, TAPPI T227, CPPA C1 FCI/332400
Volume	(0 to 100) mL	0.01 mL	
Burst Testers <sup>3</sup> –			
Pressure	(0 to 200) psi (0 to 1000) psi	1.2 psi 1.2 psi	ISO 2758, 2759, TAPPI T403, T807, T810, ASTM D774, D2529, D738 FCI/130100, FCI/130900
Dimensional	(0 to 35) mm	0.25 mm	
Melt Flow Indexers <sup>3</sup> –			
Temperature	100 °C to 400 °C	0.48 °C	ASTM D1238 FCI/460000
Bore Diameter	(0 to 10) mm	0.08 mm	
Piston Diameter	(0 to 10) mm	0.08 mm	
Mass	(0 to 6) kg	2.4 g	
Horizontal Plane Slip and Friction Tester <sup>3</sup> –			
Force	(200 to 2000) gf	2.4 gf	ISO 15359, TAPPI T549, T816, ASTM D1894, D4521 FCI/320000
Dimension	(0 to 6) in	0.001 in	
Sled Mass	(100 to 2000) g	0.05 g	

*Peter Almyer*

Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Z-Direction Tensile Testers <sup>3</sup> –			
RPM	(0 to 30) rpm	0.27 rpm	FCI/842200
Force	(20 to 80) gf	0.21 gf	
Impact Testers <sup>3</sup> –			
Dimension	(0 to 25) mm	0.04 mm	ISO 179, 180 ASTM D256, D1822, D6110 FCI/322500, FCI/430100, FCI/430200
Mass	(0 to 6) kg	0.1 G	
Notch Cutter	(0 to 0.4) in	0.002 in	FCI/220500
Release and Adhesion Tester <sup>3</sup> –			
RPM	(0 to 100) rpm	0.13 rpm	TLMI L-IA1, L-IA2, PSTC – 1, 3, 4, FINAT FTM 1, 2, 3, 4 FCI/809000
Mass	(0 to 2000) g	0.27 g	
Tensile Testers <sup>3</sup> –			
Crosshead Speed (Distance/Time)	(0 to 100) mm/min	0.88 mm/min	ISO 1924, TAPPI T404, T494, ASTM D412 FCI/840000, FCI/842100
Crosshead Travel	(0 to 300) mm	0.07 mm	
Force	(0 to 5) kN	0.025 kN	
Compression Testers <sup>3</sup> –			
Crosshead Speed	(0 to 100) mm/min	0.88 mm/min	ISO 13820, TAPPI T824, T811, T809, T825, T818, T822 FCI/173700, FCI/170000
Force	(0 to 10) kN	0.25 kN	

*Peter M. Boyer*

Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Inclined Plane Friction Testers <sup>3</sup> –			
Sled Dimensions	(2.5 x 2.5) in	0.003 in	TAPPI T815 FCI/322500
Sled Mass	200 g	0.001 g	
Plane Angle	0° to 90°	0.02°	
Time	(0 to 45) s	0.1 s	
Probe Tack Testers <sup>3</sup> –			
Dimensions	(0 to 0.5) in	0.001 in	ASTM D2979 FCI/800200
Pressure	(0 to 2.5) kgf	0.18 gf	
Time	(0 to 10) s	0.2 s	
Ink Rub Testers <sup>3</sup> –			
Dimensions	(0 to 3) in	0.001 in	TAPPI T830, ASTM D5264 FCI/101801
Mass	(0 to 1815) g	0.05 g	
Time	(0 to 60) s	0.002 s	

<sup>1</sup> This laboratory offers commercial calibration service.

<sup>2</sup> Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of  $k = 2$ . The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

<sup>3</sup> Field calibration service is available for this calibration and this laboratory meets A2LA R104 – *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these calibrations. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.





World Class Accreditation

The American Association for Laboratory Accreditation

# Accredited Laboratory

A2LA has accredited

**TESTING MACHINES INC. FIELD SERVICE DEPARTMENT**

*New Castle, DE*

for technical competence in the field of

**Calibration**

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 laboratory also meets any additional program requirements in the field of calibration. 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 22<sup>nd</sup> day of February 2010.



  
\_\_\_\_\_  
Peter Mlynar

President & CEO  
For the Accreditation Council  
Certificate Number 2091.01  
Valid to December 31, 2011

*For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.*