



THE AMERICAN ASSOCIATION FOR
LABORATORY ACCREDITATION

ACCREDITED LABORATORY

A2LA has accredited

CORPORATE CONSULTING SERVICE INC.

Akron, OH

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 18 June 2005*).

Presented this 19th day of December 2007.

A handwritten signature in cursive script, reading "Rosemary M. Robinson".

Interim President
For the Accreditation Council
Certificate Number 1424.01
Valid to December 31, 2009
REVISED November 20, 2009



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

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

CORPORATE CONSULTING SERVICE, INC.
 221 Beaver Street
 Akron, OH 44304
 Cheryl King Phone: 330 376 3600

CALIBRATION

Valid To: December 31, 2009

Certificate Number: 1424.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations¹:

I. Mechanical

Parameter/Equipment	Range	Best Uncertainty ^{2,3} (±)	Comments
Durometer ⁴ Type A Type B Type O Type T Type D Type DO Type C	(0 to 822) g (0 to 4536) g	6.9 g (0.9 points) 39 g (0.9 points)	ASTM D2240 with durocalibrator
Shore Hardness Test Blocks	All scales	3.2 points	With certified durometer
Resiliometer, Resilometer Spring	(0 to 100) points	2.3 points 2.6 points	ASTM D2632
Mooney Viscometer	(0 to 200) Mooney units	1.9 Mooney units	ASTM D1646
Rheometers – Oscillating Disc Moving Die	(0 to 200) in·lb (0 to 200) in·lb	0.4 in·lbs 1.0 in·lbs	ASTM D2084 ASTM D5289

Parameter/Equipment	Range	Best Uncertainty ^{2,3,5} (\pm)	Comments
Force – Tensile	(0 to 1000) lbs. (1000 to 2000) lbs. (2000 to 5000) lbs.	4.8 lbs 9.5 lbs 17 lbs	ASTM E4
Extensometer Elongation	0 % to 1200 %	2 % of input value	ASTM E83
Plastometer	(0 to 1) in	290 μ m	ASTM D926
Brittlepoint and Temperature Retraction	-94 °F -70 °C	0.03 °F 0.014 °C	ASTM D2137 for brittlepoint ASTM D1349 for temperature retraction
Scales and Balances	(0 to 11.3) kg	0.01 % of reading + 0.6R	Direct comparison with class F weights ASTM E898, Section 7.6
Taber Abrader – RPM Vacuum Table TIR Weights	72 rpm >137 mbar 0.002” 250 g 750 g	0.13 rpm 1.5 mbar 320 μ m 44 mg 74 mg	Manufacturer’s instructions to ASTM D3389

II. Dimensional

Parameter/Equipment	Range	Best Uncertainty ^{2, 3, 5} (\pm)	Comments
Micrometers – Outside Diameter	(0 to 4) in	(64 + 4L) μ in	Direct comparison with grade 2 gage blocks
Calipers	(0 to 12) in	0.6R	Direct comparison with grade 2 gage blocks
Thickness Gauge	(0 to 3) in	330 μ in	Direct comparison with grade 2 gage blocks
Cutting Dies	(0 to 12) in	300 μ in	Dimensional measurement

III. Thermodynamics

Parameter/Equipment	Range	Best Uncertainty ^{2, 3} (\pm)	Comments
Oven Calibration	0 °F to 700 °F 0 °F to 371 °C	0.8 °F 0.38 °C	ASTM E145, Section 4.1
Ozone Monitors and Chambers	(0 to 10) parts in 10 ⁸ (10 to 100) parts in 10 ⁸	0.16 parts in 10 ⁸ 1 parts in 10 ⁸	ASTM D4575 on-site available for chamber only

¹ This laboratory offers commercial and on-site calibration services.

² “Best Uncertainty” 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 of nearly ideal measuring equipment. Best uncertainties represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The best uncertainty of a specific calibration performed by the laboratory may be greater than the best uncertainty due to the behavior of the customer’s device, to the environment and to influences from the circumstances of the specific calibration.

³ On-site calibration service is available for this calibration, except where noted. The uncertainties achievable on a customer's site can normally be expected to be larger than the Best Measurement Capabilities (BMC) that the accredited laboratory has been assigned as Best Uncertainty 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 uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the calibration uncertainty being larger than the BMC.

⁴ Calibration is performed according to manufacturer specifications and measure in gram force.

⁵ In the statement of best uncertainty, L is the numerical value of the nominal length of the device measured in inches and R is the resolution of the device under test.