



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Cal-Chek Canada
250 Governor's Road
Dundas, ON L9H 3K3
Canada

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

A handwritten signature in black ink, appearing to read 'R.D.L.', is positioned above a horizontal line.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 11 August 2024
Certificate Number: L1001-1



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
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 April 2017).

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Cal-Chek Canada, Inc.
250 Governor's Road
Dundas, ON L9H 3K3
Kevin Newitt 905-628-4636

CALIBRATION

Valid to: **August 11, 2024**

Certificate Number: **L1001-1**

Length – Dimensional Metrology

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Extrusion Plastometers (Melt Indexers, Melt Flow Indexers)			ASTM D1238
Piston Foot Length	(0.2 to 0.3) in	1 500 µin	Caliper
Piston Foot Diameter	(0.3 to 0.4) in	120 µin	Micrometer
Automatic Timing Switch Travel	(0.2 to 1.2) in	1 200 µin	Micrometer Head
Go/No-Go Gauge	(0.082 to 0.083) in	110 µin	Micrometer
Cylinder Bore Diameter	(0.3 to 0.4) in	180 µin	Bore Gauge, Ring Gauge
Die/Orifice Length	(0.3 to 0.4) in	120 µin	Micrometer
Die/Orifice Bore Diameter	(0.082 to 0.083) in	120 µin	Go/No-Go Gauge
Extensometer Systems ² (Strain Instruments, Extensometers, Deflectometers)			ASTM E83
	(0.000 1 to 1) in	(94 + 27L) µin	Cal-60 Calibrator
	(0.005 to 17) in	(18 + 59L) µin	Gauge blocks
Displacement Measuring Systems and Devices ²			ASTM E2309/E2309M
	(0.0001 to 1) in	(150 + 540L) µin	LVDT Calibrator
	(0.005 to 3) in	(1 100 + 180L) µin	Dial Gauge
	(0.005 to 17) in	(18 + 59L) µin	Gauge blocks

Mass and Mass Related

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Force Testing Machines – Compression ²	(0.1 to 61) lbf (61 to 600 000) lbf	(0.001 1 + 0.000 3M) lbf 0.11 % of Applied Load	ASTM E4, ASTM C39, CSA A23.2-9C Dead Weights Load Cells and Display
Force Testing Machines – Tension ²	(0.1 to 61) lbf (61 to 300 000) lbf	(0.001 + 0.000 3M) lbf 0.11 % of Applied Load	ASTM E4, CSA A23.2-9C Dead Weights Load Cells and Display
Brinell Hardness Tester – Force	(500 to 3 000) kgf	4.1 kgf	Per ASTM E10 – Direct Verification using Brinell Proving Ring
Brinell Hardness Tester: HBW force = 3 000 kgf	Low Medium High	2.2 HBW 6.1 HBW 7.8 HBW	Per ASTM E10 – Indirect Verification using Standardized Test Blocks
Rockwell Hardness Testers	HRA Low Medium High HRBW Low Medium High HRC Low Medium High HRFW Low Medium High HRRW 118 HRRW	0.43 HRA 0.2 HRA 0.21 HRA 0.67 HRBW 0.59 HRBW 0.46 HRBW 0.38 HRC 0.33 HRC 0.32 HRC 0.62 HRFW 0.46 HRFW 0.47 HRFW 0.32 HRRW	Per ASTM E18 – Indirect Verification using Standardized Test Blocks



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Mass and Mass Related

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Rockwell Superficial Hardness Testers	HR15N		Per ASTM E18 – Indirect Verification using Standardized Test Blocks
	Low	0.44 HR15N	
	Medium	0.24 HR15N	
	High	0.22 HR15N	
	HR15TW		
	Low	0.36 HR15TW	
	Medium	0.37 HR15TW	
	High	0.32 HR15TW	
	HR30N		
	Low	0.41 HR30N	
	Medium	0.19 HR30N	
	High	0.30 HR30N	
	HR30TW		
	Low	0.52 HR30TW	
Medium	0.31 HR30TW		
High	0.33 HR30TW		
HR45N			
Low	0.54 HR45N		
Medium	0.58 HR45N		
High	0.29 HR45N		
HR45TW			
Low	0.70 HR45TW		
Medium	0.61 HR45TW		
High	0.46 HR45TW		
HR15YW			
90 HR15YW	0.98 HR15YW		
Extrusion Plastometers – Weights	(90 to 12 000) g	1.4 g	Per ASTM D1238 using Bench Scales

Thermodynamic

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Extrusion Plastometers – Temperature Control Systems	(20 to 400) °C	0.08 °C	Per ASTM D1238 using RTD Sensor and Display

Time and Frequency

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Extrusion Plastometers – Time Devices/Timers	(10 to 600) s	1.3 s	Per ASTM D1238 using a Stopwatch
Crosshead Speed	(0.04 to 0.5) in/min	0.12 % of reading	Per ASTM E2658 using a Stopwatch and Displacement Measuring System

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 ($k=2$), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.
2. M = force in lbf, L = length in inches.
3. This scope is formatted as part of a single document including Certificate of Accreditation No. L1001-1.



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