



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY CANADA INC.

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MECHANICAL

Valid To: October 31, 2024

Certificate Number: 6524.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory for the following tests on Building Products, Automotive, Military and Defense Products and Systems, within the equipment parameters listed at the end of this document:

<u>Test Method:</u>	<u>Test Description:</u>
<b>Accelerated Aging, Product Durability &amp; Energy Systems:</b>	
ASTM D642	Standard test method for determining compressive resistance of shipping containers, components, and unit loads
ASTM D880	Standard test method for impact testing for shipping containers and systems (samples up to 1000 lbs.)
ASTM D999	Standard test methods for vibration testing of shipping containers
ASTM D1499	Standard practice for filtered open-flame carbon-arc exposures of plastics (except ISO 4892-4)
ASTM D2126	Standard test method for response of rigid cellular plastics to thermal and humid aging
ASTM D2565	Standard practice for xenon-arc exposure of plastics intended for outdoor applications (except D1293 and ISO 4892-2)
ASTM D4169	Standard practice for performance testing of shipping containers and systems (except D951, D4003, D5265, D5277, D5487, D6344 and D7386)
ASTM D4332	Standard practice for conditioning containers, packages, or packaging components for testing
ASTM D4459	Standard practice for xenon-arc exposure of plastics intended for indoor applications
ASTM D4587	Standard practice for fluorescent UV-condensation exposures of paint and related coatings
ASTM D4728	Standard test method for random vibration testing of shipping containers
ASTM D4798/D4798M	Standard practice for accelerated weathering test conditions and procedures for bituminous materials (xenon-arc method) (except D1670 and D36)
ASTM D5276	Standard test method for drop test of loaded containers by free fall

<b><u>Test Method:</u></b>	<b><u>Test Description:</u></b>
ASTM D6055	Standard test methods for mechanical handling of unitized loads and large shipping cases and crates
ASTM D6179	Standard test methods for rough handling of unitized loads and large shipping cases and crates
ASTM D6653/D6653M	Standard test methods for determining the effects of high altitude on packaging systems by vacuum method
ASTM E604	Standard Test Method for Dynamic Tear Testing of Metallic Materials
ASTM F1980	Standard guide for accelerated aging of sterile barrier systems for medical devices
ASTM G152	Standard practice for operating open flame carbon arc light apparatus for exposure of nonmetallic materials (except ISO 4892-4)
ASTM G153	Standard practice for operating enclosed carbon arc light apparatus for exposure of nonmetallic materials (except ISO 4892-4)
ASTM G154	Standard practice for operating fluorescent ultraviolet (UV) lamp apparatus for exposure of nonmetallic materials (except ISO 4892-4)
ASTM G155	Standard practice for operating xenon arc light apparatus for exposure of non-metallic materials (except ISO 4892-2; ISO 105 B04, ISO 105 B05, ISO 105 B06, and ISO 1134)
DIN 75 220	Ageing of Automotive Components in Solar Simulation Units
ISO 8301	Determination of steady-state thermal resistance and related properties - Heat flow meter apparatus
ISTA 1A	Packaged products weighing 150 lb. (68 kg) or less
ISTA 1B	Packaged products weighing over 150 lb. (68 kg)
ISTA 1C	Extended testing for packaged products 150 lb. (68 kg) or less
ISTA 1D	Extended testing for packaged products over 150 lb. (68 kg)
ISTA 1E	Unitized loads of same product
ISTA 1G	Packed products 150 lb. (68 kg) or less (random vibration)
ISTA 1H	Packaged products over 150 lb. (68 kg) (random vibration)
ISTA 2A	Packaged products 150lb (68 kg) or less
ISTA 2B	Packaged products over 150lb (68 kg)
ISTA 3E	Similar packaged-products in unitized loads
ISTA 7D	Temperature test for transport packaging (thermal cycling only)
ISTA 6-Samsclub	Packaged products for Sam's Club® distribution system shipment (ISTA)
JIS D 0205	Test method of weatherability for automotive parts
MIL-STD-810E	Environmental test methods and engineering guidelines (only for sections 500.3 (except III and IV), 501.3, 502.3, 507.3)
MIL-STD-810E	Environmental test methods and engineering guidelines - Method 505.3 Solar Radiation (Sunshine)
MIL-STD-810E	Environmental test methods and engineering guidelines (method 512.3)
MIL-STD-810E	Environmental test methods and engineering guidelines (only for 514.4, 516.4)



<b><u>Test Method:</u></b>	<b><u>Test Description:</u></b>
MIL-STD-810F	Environmental engineering considerations and laboratory tests (only for sections 500.4 (except III and IV), 501.4, 502.4, and 507.4)
MIL-STD-810F	Environmental engineering considerations and laboratory tests (method 505.4)
MIL-STD-810F	Environmental engineering considerations and laboratory tests (only for 514.4, 516.5 except V, VII and VIII)
MIL-STD-810G	Environmental engineering considerations and laboratory tests (only for Sections 500.5 (except III and IV), 501.5, 502.5, and 507.5)
MIL-STD-810G	Environmental engineering considerations and laboratory tests (only for 514.6, 516.6 except for V, VII and VIII)
NISSAN NES M0135	Weatherability and light resistance test methods for synthetic resin
RTCA/DO-160D	Environmental conditions and test procedures for airborne equipment (only for section 5)
RTCA/DO-160D	Environmental conditions and test procedures for airborne equipment (only for 7 [samples up to 1000 lbs.], 8)
RTCA/DO-160E	Environmental conditions and test procedures for airborne equipment (only for section 5)
RTCA/DO-160E	Environmental conditions and test procedures for airborne equipment (only for 7 [samples up to 1000 lbs.], 8)
RTCA/DO-160F	Environmental conditions and test procedures for airborne equipment (only for section 5)
RTCA/DO-160F	Environmental conditions and test procedures for airborne equipment (only for 7 [samples up to 1000 lbs.], 8)
RTCA/DO-160G	Environmental conditions and test procedures for airborne equipment
SAE J1885	Accelerated exposure of automotive interior trim components using a controlled irradiance water cooled xenon-arc apparatus
SAE J1960	Accelerated exposure of automotive exterior materials using a controlled irradiance water-cooled xenon arc apparatus
SAE J2412	Accelerated exposure of automotive interior trim components using a controlled irradiance xenon-arc apparatus
SAE J2527	Performance based standard for accelerated exposure of automotive exterior materials using a controlled irradiance xenon-arc apparatus
Toyota TSH1585G	Accelerated weathering resistance of paint film
<b>Heating &amp; Cooling:</b>	
CAN/CSA C191	Performance of electric storage tank water heaters for domestic hot water service
CAN/CSA C439	Laboratory methods of test for rating the performance of heat/energy-recovery ventilators
CAN/CSA F378	Solar collectors
CAN/CSA F379.1	Solar domestic hot water systems (liquid to liquid heat transfer)
CAN/CSA F379.2	Seasonal use solar domestic hot water systems

<b><u>Test Method:</u></b>	<b><u>Test Description:</u></b>
CSA P.3	Testing method for measuring energy consumption and determining efficiencies of gas-fired and fuel oil-fired water heaters
CSA P.7	Test method for measuring energy loss of gas-fired instantaneous water heaters
CSA P.9	Test method for determining the performance of combined space and water heating systems (combos)
CSA P.10	Test method for measuring energy loss of gas-fired instantaneous water heaters
<b>Physical Characterization:</b>	
AATCC 127	Water resistance: hydrostatic pressure test
ANSI/BIFMA X5.1	General-purpose office chairs - tests
ANSI/BIFMA X5.4	Lounge seating
ANSI/BIFMA X5.4.1	Large Occupant Public and Lounge Seating
ANSI/BIFMA X5.5	Desk products
ANSI/BIFMA X5.6	Panel systems - tests
ANSI/BIFMA X5.9	Storage units
ANSI/BIFMA X5.11	General-purpose large occupant office chairs
ANSI/BIFMA X6.1	Educational seating
ANSI/BIFMA X6.4	Occasional-Use Seating
ANSI/BIFMA/CMD 1	Universal measurement procedure for the use of the BIFMA chair measuring device
SEFA-8M	Laboratory furniture casework, shelving and tables recommended practices – metal (except 8)
SEFA-8W	Laboratory furniture casework, shelving and tables recommended practices – wood (except 8.1)
ANSI/KCMA A161.1	Performance and construction standard for kitchen and vanity cabinets
CKCA Standard	Construction and Material Testing Standard for Kitchen Cabinets and Vanities
ANSI/SOHO S6.5	Small office/home office furniture – tests American national standard for office furnishings
CAN/CGSB 44.227	Free-standing office desk products and components (except 4.3, 4.4, 5, 5.2, 5.4, 5.6, 6.1.2)
CAN/CGSB 44.229	Interconnecting panel systems and supported components (except 4.3, 4.4, 5.2, 5.4, 6.1.4, 6.1.5, 6.1.6, 6.1.9, 6.1.10, 6.1.11, 6.2.5, and 6.9)
CAN/CGSB 44.232	Task chairs for office environments (except 4.3, 4.4, 4.14)
GPD 2	Decking Systems (except 5.4, 9.2, 9.3, 9.4, 9.5)
GPD 6	Side Chairs with Metal Frame (except 7.4 and 7.7)
GPD 10	Metal Filing and Storage Cabinets (except 5.13 and 6)
PD-1	Purchase Description to Accompany CAN/CGSB 44.227 - General Office Furniture (except 6.3)
PD-3	Purchase Description to Accompany CAN/CGSB 44.227 – Executive Furniture (except 5.1, and 5.2)
PD-4	Purchase Description to Accompany Interconnecting Panels and Supported Components (except 6.5, 6.6, and 6.8)



<b><u>Test Method:</u></b>	<b><u>Test Description:</u></b>
ASTM C165	Standard test method for measuring compressive properties of thermal insulations (except for E4, E177 and E240)
ASTM C167	Standard test methods for thickness and density of blanket or batt thermal insulations
ASTM C203	Standard test methods for breaking load and flexural properties of block-type thermal insulation
ASTM C302	Standard test method for density and dimensions of preformed pipe-covering-type thermal insulation
ASTM C303	Standard test method for dimensions and density of preformed block and board-type thermal insulation
ASTM C446	Standard test method for breaking load and calculated modulus of rupture of preformed insulation for pipes
ASTM C550	Standard test method for measuring trueness and squareness of rigid block and board thermal insulation
ASTM C794	Standard test method for adhesion-in-peel of elastomeric joint sealants
ASTM C836/C836M	Standard specification for high solids content, cold liquid-applied elastomeric waterproofing membrane for use with
ASTM C1304	Standard test method for assessing the odor emission of thermal insulation materials
ASTM C1305	Standard test method for crack bridging ability of liquid-applied waterproofing membrane
ASTM C1335	Standard test method for measuring non-fibrous content of man-made rock and slag mineral fiber insulation
ASTM C1511	Standard test method for determining the water retention (repellency) characteristics of fibrous glass insulation (aircraft type)
ASTM C1559	Standard test method for determining wicking of fibrous glass blanket insulation (aircraft type)
ASTM D523	Standard test method for specular gloss
ASTM D618	Standard practice for conditioning plastics for testing
ASTM D751	Standard test methods for coated fabrics
ASTM D882	Standard test method for tensile properties of thin plastic sheeting
ASTM D897	Standard test method for tensile properties of adhesive bonds
ASTM D903	Standard test method for peel or stripping strength of adhesive bonds
ASTM D1056	Standard specification for flexible cellular materials—sponge or expanded rubber (except ASTM standards D471 and D575)
ASTM D1621	Standard test method for compressive properties of rigid cellular plastics
ASTM D1622	Standard test method for apparent density of rigid cellular plastics
ASTM D1623	Standard test method for tensile and tensile adhesion properties of rigid cellular plastics
ASTM D1761	Standard test methods for mechanical fasteners in wood
ASTM D2136	Standard test method for coated fabrics—low-temperature bend test

<b><u>Test Method:</u></b>	<b><u>Test Description:</u></b>
ASTM D2244	Standard practice for calculation of color tolerances and color differences from instrumentally measured color coordinates
ASTM D2842	Standard test method for water absorption of rigid cellular plastics
ASTM D3045	Standard practice for heat aging of plastics without load
ASTM D3359	Standard test methods for measuring adhesion by tape test
ASTM D3363	Standard test method for film hardness by pencil test
ASTM D3389	Standard test method for coated fabrics abrasion resistance (rotary platform abrader)
ASTM D3574	Standard test methods for flexible cellular materials—slab, bonded, and molded urethane foams
ASTM D4060	Standard test method for abrasion resistance of organic coatings by the taber abraser
ASTM D5420	Standard test method for impact resistance of flat, rigid plastic specimen by means of a striker impacted by a falling weight (Gardner impact)
ASTM E96/E96M	Standard test methods for water vapor transmission of materials
ASTM F2096	Standard test method for detecting gross leaks in packaging by internal pressurization (bubble test)
BS EN 50155	Railway applications – Rolling stock – Environmental Tests
BS EN 61373	Railway applications – Rolling stock – Shock and Vibration Tests
ASTM C578	Standard specification for rigid, cellular polystyrene thermal insulation
ASTM C591	Standard specification for unfaced preformed rigid cellular polyisocyanurate thermal insulation (except C177, C871, C1114 and D2856)
ASTM C592	Standard specification for mineral fiber blanket insulation and blanket-type pipe insulation (metal-mesh covered) (industrial type)
ASTM C610	Standard specification for molded expanded perlite block and pipe thermal insulation (except C177)
<b>Solar Thermal</b>	
ASHRAE 93	Methods of testing to determine the thermal performance of solar collectors
EN ISO 9806	Solar energy -- solar thermal collectors -- test methods
EN 12975-2	Thermal solar systems and components - solar collectors - part 2: test methods
SRCC 100	Minimum standards for solar thermal collectors
SRCC 600	Minimum standard for solar thermal concentrating collectors
SRCC TM-1	Solar thermal component test and analysis protocol

<b>Equipment parameters</b>	
Environmental: Temperature and humidity capabilities	Temperature Chamber -60°C to + 100°C Humidity 5% RH to 95%RH
Vibration: Electrodynamic vibration and shock capabilities	Displacement: ±1 inch(25mm) 2 inch (50 mm) total displacement. Frequency: 0 – 3,000H2 Force rating:4,000 lfb (17.8kN0) Shock: 60Gs







## Accredited Laboratory

A2LA has accredited

### ELEMENT MATERIALS TECHNOLOGY CANADA INC.

*Mississauga, Ontario, Canada*

for technical competence in the field of

### Mechanical Testing

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



Presented this 2<sup>nd</sup> day of March 2023.

A blue ink signature of Trace McInturff, written over a horizontal line.

Mr. Trace McInturff, Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 6524.02  
Valid to October 31, 2024

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