#### Miami-Dade County, Florida

## DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES BOARD AND CODE ADMINISTRATION DIVISON

PRODUCT CONTROL SECTION

Laboratory Certificate



11805 S.W. 26 Street-Room 208 Miami, Florida 33175-2474

T (786) 315-2590 Fax (786) 315-2599

This certifies that PRI Construction Materials Technologies, LLC located at 6412 Badger Drive, Tampa, RL 33610 is an approved Testing Laboratory in accordance with Mami-Dade County Department of Regulatory and Economic Resources and Protocol TAS301-94, and is Certified to perform the following tests:

TAS100, TAS100A, TA101, TAS102
TAS102 (A), TAS103 (Inclusive of TAS124 in lab)
TAS104, TAS105, TAS106
TAS107, TAS108,
TAS110 See attached qualifications sheet.
TAS111(A, B, & C), TAS112
TAS114 Appendix (C, D, E, F, G, H, I, J & K)
INTERNATIONAL ACCREDITATION
SERVICES, INC. CERTIFICATE OF
ACCREDITATION TL-189

TAS116, TAS117(A), (B) & (C) TAS121, TAS123, TAS123(A), TAS124 TAS125, TAS129, TAS131 TAS132, TAS135, TAS138 TAS139, TAS140, TAS141 TAS142, TAS143, TAS201 TAS202, TAS203, ASTM D5635 ASTM D6356, UL 2390

Results of the above mentioned test shall be properly submitted to the Mami-Dade County Department of Regulatory and Economic Resources per TAS301-94, along with all other documentation required for the approval of products. Approved engineer(s) for this laboratory:

Charles L. Thomas, P.E., Duc T. Nguyen, P.E., Zachary Robert Priest, P.E.

This Certification and Registration Approved: <u>August 10, 2022</u>
This Certification and Registration Expires: <u>August 9, 2026</u>

Certification No.: 23-0718.01 Revises: 21-0628.04

Helmi A Makar, P.E., M.S.

Product Control Section Supervisor

Product Control Section

Americo Segura, M.S., CGC Quality Assurance Unit Supervisor

Product Control Section

The Mani-Dade County Department of Regulatory and Economic Resources reserves the right to remove this certification for non-compliance with rules and regulations as set by Protocol TAS301-94.

#### Miami-Dade County, Florida

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PRODUCT CONTROL SECTION

**Laboratory Certificate** 



11805 S.W. 26 Street-Room 208 Miami, Florida 33175-2474 T (786) 315-2590 Fax (786) 315-2599

Subject: Approved Test Procedures

PRI Construction Materials Technologies, LLC

File No. 23-0718.01

TASTIO Physical Property Requirements of Roof Membranes, Insulation Materials, Membrane

Coatings and Other Roofing Components

2. ASPHALT BUILT-UP ROOF SYSTEMS: All Sections

3. COAL-TAR PITCH BUILT-UP ROOF SYSTEMS: All Sections

4. SINGLE-PLY ROOF ASSEMBLIES: All Sections

5. LIQUID POLYETHYLENE ROOF ASSEMBLIES: All Sections

6. SPRAY-APPLIED POLYURETHANE FOAM ROOF ASSEMBLIES: All Sections

7. COATINGS: All Sections

8. ROOFING INSULATION: All sections except ASTM E84 & ASTM E108

9. FIBER CEMENT, DISCONTINUOUS ROOF ASSEMBLIES: All sections

10. NON-RIGID, DISCONTINUOUS (SHINGLE) ROOF ASSEMBLIES: All sections except

ASTM E108

13. MECHANICAL ATTACHEMENT COMPONENTS: All sections

**14. ATTIC VENTILATION PRODUCTS:** All Sections

15. METAL PANEL ROOF ASSEMBLIES: All sections except ASTM E108

17. NON-RIGID TILES/SHAKES/SLATE/SHINGLES PRODUCTS (PLASTIC): All sections

except ASTM E84



# CERTIFICATE OF ACCREDITATION

This is to attest that

#### PRI CONSTRUCTION MATERIALS TECHNOLOGIES, LLC

6412 BADGER DRIVE TAMPA, FLORIDA 33610, U.S.A.

**Testing Laboratory TL-189** 

has met the requirements of AC89, *IAS Accreditation Criteria for Testing Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date November 21, 2022



President

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

# PRI CONSTRUCTION MATERIALS TECHNOLOGIES, LLC

www.pri-group.com

Contact Name Brad Grzybowsk

**Contact Phone** +1-813-621-5777

Accredited to ISO/IEC 17025:2017

Effective Date November 21, 2022

СМТ	
ASTM C39/C39M	Standard test method for compressive strength of cylindrical concrete specimens
ASTM C67	Standard test methods for sampling and testing brick and structural clay tile
ASTM C406/C406M	Standard specification for roofing slate
ASTM C495/C495M	Standard test method for compressive strength of lightweight insulating concrete
ASTM C796/C796M	Standard test method for foaming agents for use in producing cellular concrete using preformed foam
ASTM C1167	Standard specification for clay roof tiles
ASTM C1186	Standard specification for flat fiber-cement sheets
ASTM D1187/D1187M	Standard specification for asphalt-base emulsions for use as protective coatings for metal
ASTM C1492	Standard specification for concrete roof tile
ASTM D4	Standard test method for bitumen content
ASTM D5/D5M	Standard test method for penetration of bituminous materials
ASTM D41/D41M	Standard specification for asphalt primer used in roofing, dampproofing, and waterproofing
ASTM D43/D43M	Standard specification for coal tar primer used in roofing, dampproofing, and waterproofing
ASTM D224	Standard specification for smooth-surfaced asphalt roll roofing (organic felt)
ASTM D225	Standard specification for asphalt shingles (organic felt) surfaced with mineral granules (excluding section 9.1.3 fire classification)
ASTM D226/D226M	Standard specification for asphalt-saturated organic felt used in roofing and waterproofing





#### International Accreditation Service, Inc.

ASTM D227/D227M	Standard specification for coal-tar-saturated organic felt used in roofing and waterproofing
ASTM D228/D228M	Standard test methods for sampling, testing, and analysis of asphalt roll roofing, cap sheets, and shingles used in roofing and waterproofing
ASTM D312/D312M	Standard specification for asphalt used in roofing
ASTM D450/D450M	Standard specification for coal-tar pitch used in roofing, dampproofing, and waterproofing
ASTM D1863/D1863M	Standard specification for mineral aggregate used on built-up roofs
ASTM D2626/D2626M	Standard specification for asphalt-saturated and coated organic felt base sheet used in roofing
ASTM D2824/D2824M	Standard specification for aluminum-pigmented asphalt roof coatings, nonfibered, and fibered without asbestos
ASTM D2939	Standard test methods for emulsified bitumens used as protective coatings
ASTM D3019	Standard specification for lap cement used with asphalt roll roofing, non-fibered, asbestos-fibered, and non-asbestos-fibered
ASTM D3462/D3462M	Standard specification for asphalt shingles made from glass felt and surfaced with mineral granules (excluding section 5.3 fire classification)
ASTM D3909	Standard specification for asphalt roll roofing (glass felt) surfaced with mineral granules
ASTM D4479/D4479M	Standard specification for asphalt roof coatings - asbestos-free
ASTM D4586/D4586M	Standard specification for asphalt roof cement, asbestos-free
ASTM D4601/D4601M	Standard specification for asphalt-coated glass fiber base sheet used in roofing
ASTM D4869/D4869M	Standard specification for asphalt-saturated organic felt underlayment used in steep slope roofing
ASTM D4990	Standard specification for coal tar glass felt used in roofing and waterproofing
ASTM D5147/D5147M	Standard test methods for sampling and testing modified bituminous sheet material
ASTM D5643/D5643M	Standard specification for coal tar roof cement, asbestos free
ASTM D6152/D6152M	Standard specification for SEBS-modified mopping asphalt used in roofing
ASTM D6380/D6380M	Standard specification for asphalt roll roofing (organic felt)
CGSB 37.50-M89	Hot-applied, rubberized asphalt for roofing and waterproofing
CSA A123.3	Asphalt saturated organic roofing felt
CSA A123.4	Asphalt for constructing built-up roof coverings and waterproofing systems
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#### International Accreditation Service, Inc.

CSA A123.5	Asphalt shingles made from glass felt and surfaced with mineral granules
CSA A220.1, Section 4.4	Underlayment Materials
ICC-ES AC180	Clay and concrete roof tiles (test methods referenced in section 3.0, except section 3.6)
ICC-ES AC376	Reinforced cementitious sheets used as wall and ceiling sheathing and floor underlayment (test methods referenced in sections 3.0 and 4.0, excluding Sections 3.7, 3.8 and 4.2)
ICC ES EG270	Evaluation guideline for asphalt shingles made with an attached interplay (test methods referenced in section 3.0, excluding section 3.4 fire classification)
TAS 141	Standard requirements for coal tar (cutback) roof coating, brushing consistency
TAS 142	Standard requirements for coal tar roof cement, asbestos free
Environmental	
ASTM B117	Standard practice for operating salt spray (fog) apparatus
ASTM C1371	Standard test method for determination of emittance of materials near room temperature using portable emissometers
ASTM C1549	Standard test method for determination of solar reflectance near ambient temperature using a portable solar reflectometer
ASTM D1149	Standard test methods for rubber deterioration—cracking in an ozone controlled environment
ASTM D2247	Standard practice for testing water resistance of coatings in 100 % relative humidity
ASTM D3960	Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings
ASTM D4798/D4798M	Standard practice for accelerated weathering test conditions and procedures for bituminous materials (xenon-arc method)
ASTM D4799/D4799M	Standard practice for accelerated weathering test conditions and procedures for bituminous materials (fluorescent UV, water spray, and condensation method)
ASTM D6490	Standard test method for water vapor transmission of nonfilm forming treatments used on cementitious panels
ASTM D7897	Standard practice for laboratory soiling and weathering of roofing materials to simulate effects of natural exposure on solar reflectance and thermal emittance
ASTM E96/E96M	Standard test methods for water vapor transmission of materials
ASTM E136	Standard test method for behavior of materials in a vertical tube furnace at 750°C
ASTM E546	Standard test method for frost/dew point of sealed insulating glass units
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#### International Accreditation Service, Inc.

ASTM E1918	Standard test method for measuring solar reflectance of horizontal and low-sloped surfaces in the field
ASTM E1980	Standard practice for calculating solar reflectance index of horizontal and low-sloped opaque surfaces
ASTM E2188	Standard practice for calculating solar reflectance index of horizontal and low-sloped opaque surfaces
ASTM E2189	Standard test method for testing resistance to fogging in insulating glass units
ASTM E2190	Standard specification for insulating glass unit performance and evaluation
ASTM E2649	Standard test method for determining argon concentration in sealed insulating glass units using spark emission spectroscopy
ASTM G85	Standard practice for modified salt spray (fog) testing
ASTM G151	Standard practice for exposing nonmetallic materials in accelerated test devices that use laboratory light sources
ASTM G154	Standard practice for operating fluorescent ultraviolet (UV) lamp apparatus for exposure of nonmetallic materials
ASTM G155	Standard practice for operating xenon arc light apparatus for exposure of non-metallic materials
CRRC-1	Standard practice for measuring solar reflectance of a flat, opaque, and heterogeneous surface using a portable solar reflectometer
ISO 11890-2	Paints and varnishes - Determination of volatile organic compound (VOC) content - Part 2: Gas-chromatographic method
US EPA Method 24	Determination of volatile matter content, density, volume solids, and weight solids of surface coatings
Physical	
AAMA 303	Voluntary specification for rigid polyvinyl chloride (PVC) exterior profiles
AAMA 304	Voluntary specification for acrylonitrile-butadiene-styrene (ABS) exterior profiles capped with ASA or ASA/PVC blends
AAMA 305	Voluntary specification for fiber reinforced thermoset profiles
AAMA 308	Voluntary specification for cellular polyvinyl chloride (PVC) exterior profiles
AAMA 450	Voluntary performance rating method for mulled fenestration assemblies
AAMA 501	Methods of Test for Exterior Walls (excluding sections 4.1.6, 4.1.7, 4.1.12, 4.1.14, 4.1.15, 4.1.16, and 4.2)
AAMA 611	Voluntary specification for anodized architectural aluminum



#### International Accreditation Service, Inc.

AAMA 612	Voluntary specification, performance requirements, and test procedures for combined coatings of anodic oxide and transparent organic coatings on architectural aluminum
AAMA 613	Voluntary performance requirements and test procedures for organic coatings on plastic profiles
AAMA 614	Voluntary specification, performance requirements and test procedures for high performance organic coatings on plastic profiles
AAMA 615	Voluntary specification, performance requirements and test procedures for superior performing organic coatings on plastic profiles
AAMA 623	Voluntary Specification, Performance Requirements and Test Procedures for Organic Coatings on Fiber Reinforced Thermoset Profiles
AAMA 624	Voluntary specification, performance requirements and test procedures for high performance organic coatings on fiber reinforced thermoset profiles
AAMA 625	Voluntary Specification, Performance Requirements and Test Procedures for Superior Performance Organic Coatings on Fiber Reinforced Thermoset Profiles
AAMA 633	Voluntary Specification, Performance Requirements and Test Procedures for Exterior Stain Finishes on Wood, Cellulosic Composites and Fiber Reinforced Thermoset Window and Door Components
AAMA 701/702	Voluntary specification for pile weatherstripping and replaceable fenestration weatherseals
AAMA 711	Voluntary specification for self adhering flashing used for installation of exterior wall fenestration products
AAMA 712	Voluntary specification for mechanically attached flexible flashing
AAMA 713	Voluntary test method to determine chemical compatibility of sealants and self-adhered flexible flashings
AAMA 714	Voluntary specification for liquid applied flashing used to create a water-resistive seal around exterior wall openings in buildings
AAMA 800	Voluntary specifications and test methods for sealants
AAMA 812	Voluntary practice for assessment of single component aerosol expanding polyurethane foams for sealing rough openings of fenestration installations
AAMA 910	Voluntary "Life Cycle" Specifications and Test Methods for AW Class Architectural Windows and Doors
AAMA 930	Voluntary specification for the water penetration resistance and structural load performance of locking/latching hardware used in side-hinged door systems
AAMA 1506	Voluntary Test Method for Laboratory Heat Build-Up Effects on Fenestration Products



#### International Accreditation Service, Inc.

AAMA 2603	Voluntary specification, performance requirements and test procedures for pigmented organic coatings on aluminum extrusions and panels (with coil coating appendix)
AAMA 2604	Voluntary specification, performance requirements and test procedures for high performance organic coatings on aluminum extrusions and panels (with coil coating appendix)
AAMA 2605	Voluntary specification, performance requirements and test procedures for superior performing organic coatings on aluminum extrusions and panels (with coil coating appendix)
AMCA 540	Large missile impact
AMCA 550	Test method for high velocity wind-driven rain resistant louvers
ANSI/BHMA A156.1	Butts and hinges
ANSI/BHMA A156.2	Bored & preassembled locks and latches
ANSI/BHMA A156.5	Cylinders and input devices for locks
ANSI/BHMA A156.12	Interconnected locks & latches
ANSI/BHMA A156.13	Mortise locks
ANSI/BHMA A156.17	Self closing hinges
ANSI/SDI/BHMA A250.13	Testing and rating of – severe windstorm resistant components for swinging door assemblies for protection of building envelopes
ANSI/FM 4474	Standard for evaluating the simulated wind uplift resistance of roof assemblies using static positive and/or negative differential pressures
ANSI/UL 1897	Standard for uplift tests for roof covering systems
ANSI/UL 2390	Standard for safety test method for wind resistant asphalt shingles with sealed tabs
ASPE Z1034	Test method for evaluating roof drain performance
ASTM C97/C97M	Standard test methods for absorption and bulk specific gravity of dimension stone
ASTM C297/C297M	Standard test method for flatwise tensile strength of sandwich constructions
ASTM C473	Standard test methods for physical testing of gypsum panel products
ASTM C482	Standard test method for bond strength of ceramic tile to Portland cement paste
ASTM C567/C567M	Standard test method for determining density of structural lightweight concrete
ASTM C661	Standard test method for indentation hardness of elastomeric-type sealants by means of a durometer
ASTM C794	Standard test method for adhesion-in-peel of elastomeric joint sealants
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#### International Accreditation Service, Inc.

ASTM C836/C836M	Standard specification for high solids content, cold liquid-applied elastomeric waterproofing membrane for use with separate wearing course
ASTM C957/C957M	Standard specification for high-solids content, cold liquid-applied elastomeric waterproofing membrane with integral wearing surface
ASTM C1178/C1178M	Standard specification for coated glass mat water-resistant gypsum backing panel
ASTM C1185	Standard test methods for sampling and testing non-asbestos fiber-cement flat sheet, roofing and siding shingles, and clapboards
ASTM C1369	Standard specification for secondary edge sealants for structurally glazed insulating glass units
ASTM C1382	Standard test method for determining tensile adhesion properties of sealants when used in exterior insulation and finish systems (EIFS) joints
ASTM C1522	Standard test method for extensibility after heat aging of cold liquid-applied elastomeric waterproofing membranes
ASTM C1629/C1629M	Standard classification for abuse-resistant nondecorated interior gypsum panel products and fiber-reinforced cement panels
ASTM D36/D36M	Standard test method for softening point of bitumen (ring-and-ball apparatus)
ASTM D88	Standard test method for saybolt viscosity
ASTM D92	standard test method for flash and fire points by Cleveland open cup tester
ASTM D95	Standard test method for water in petroleum products and bituminous materials by distillation
ASTM D146/D146M	Standard test methods for sampling and testing bitumen-saturated felts and woven fabrics for roofing and waterproofing
ASTM D256	Standard test methods for determining the izod pendulum impact resistance of plastics
ASTM D412	Standard test methods for vulcanized rubber and thermoplastic elastomers—tension
ASTM D570	Standard test method for water absorption of plastics
ASTM D618	Standard Practice for Conditioning Plastics for Testing
ASTM D624	Standard test method for tear strength of conventional vulcanized rubber and thermoplastic elastomers
ASTM D635	Standard test method for rate of burning and/or extent and time of burning of plastics in a horizontal position
ASTM D638	Standard test method for tensile properties of plastics
ASTM D751	Standard test methods for coated fabrics
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#### International Accreditation Service, Inc.

ASTM D790	Standard test methods for flexural properties of unreinforced and reinforced plastics and electrical insulating materials
ASTM D816	Standard test methods for rubber cements
ASTM D882	Standard test method for tensile properties of thin plastic sheeting
ASTM D1042	Standard test method for linear dimensional changes of plastics caused by exposure to heat and moisture
ASTM D1204	Standard test method for linear dimensional changes of nonrigid thermoplastic sheeting or film at elevated temperature
ASTM D1227	Standard specification for emulsified asphalt used as a protective coating for roofing
ASTM C1305	Standard test method for crack bridging ability of liquid-applied waterproofing membrane
ASTM C1306	Standard test method for hydrostatic pressure resistance of a liquid-applied waterproofing membrane
ASTM D1370/D1370M	Standard test method for contact compatibility between asphaltic materials (oliensis test)
ASTM D1621	Standard test method for compressive properties of rigid cellular plastics
ASTM D1622/D1622M	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 D1781	Standard test method for climbing drum peel for adhesives
ASTM D1876	Standard test method for peel resistance of adhesives (T-peel test)
ASTM D1894	Standard test method for static and kinetic coefficients of friction of plastic film and sheeting
ASTM D1929	Standard test method for determining ignition temperature of plastics
ASTM D1970/D1970M	Standard specification for self-adhering polymer modified bituminous sheet materials used as steep roofing underlayment for ice dam protection
ASTM D1992	Standard guide for testing synthetic plasticizers used in rubber
ASTM D2042	Standard test method for solubility of asphalt materials in trichloroethylene
ASTM D2126	Standard test method for response of rigid cellular plastics to thermal and humid aging
ASTM D2178/D2178M	Standard specification for asphalt glass felt used in roofing and waterproofing
ASTM D2196	Standard test methods for rheological properties of non-Newtonian materials by rotational viscometer
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#### International Accreditation Service, Inc.

Standard test method for rubber property—durometer hardness
Standard test method for water absorption of rigid cellular plastics
Standard test method for density of smoke from the burning or decomposition of plastics
Standard test method for open-cell content of rigid cellular plastics by the air pycnometer
Standard test method for wind-resistance of steep slope roofing products (fan- induced method)
Standard specification for liquid-applied neoprene and chlorosulfonated polyethylene used in roofing and waterproofing
Standard specification for rigid poly (vinyl chloride) (PVC) siding
Standard test method for impact resistance of bituminous roofing systems
Standard specification for emulsified asphalt adhesive for adhering roof insulation
Standard practice for rubber—measurement of dimensions
Standard test method for abrasion resistance of organic coatings by the taber abraser
Standard Test Methods for Impact Resistance of Rigid Poly(Vinyl Chloride) (PVC) Building Products
Standard test method for viscosity determination of asphalt at elevated temperatures using a rotational viscometer
Standard specification for poly (vinyl chloride) sheet roofing
Standard test method for pull-off strength of coatings using portable adhesion testers
Standard specification for EPDM sheet used in single-ply roof membrane
Standard test method for index puncture resistance of geomembranes and related products
Standard test method for coefficient of static friction of uncoated writing and printing paper by use of the inclined plane method
Standard test method for granule adhesion to mineral surfaced roofing by abrasion
Standard specification for reinforced CSM (chlorosulfonated polyethylene) sheet used in single-ply roof membrane
Standard test method for hydrostatic pressure resistance of waterproofing membranes



#### International Accreditation Service, Inc.

ASTM D5602/D5602M	Standard test method for static puncture resistance of roofing membrane specimens
ASTM D5636/D5636M	Standard test method for low temperature unrolling of felt or sheet roofing and waterproofing materials
ASTM D5849/D5849M	Standard test method for evaluating resistance of modified bituminous roofing membrane to cyclic fatigue (joint displacement)
ASTM D5893	Standard specification for cold applied, single component, chemically curing silicone joint sealant for portland cement concrete pavements
ASTM D6083	Standard specification for liquid applied acrylic coating used in roofing
ASTM D6134	Standard specification for vulcanized rubber sheets used in waterproofing systems
ASTM D6162/D6162M	Standard specification for styrene butadiene styrene (SBS) modified bituminous sheet materials using a combination of polyester and glass fiber reinforcements
ASTM D6163/D6163M	Standard specification for styrene butadiene styrene (SBS) modified bituminous sheet materials using glass fiber reinforcements
ASTM D6164/D6164M	Standard specification for styrene butadiene styrene (SBS) modified bituminous sheet materials using polyester reinforcements
ASTM D6221/D6221M	Standard specification for reinforced bituminous flashing sheets for roofing and waterproofing
ASTM D6222/D6222M	Standard specification for atactic polypropylene (APP) modified bituminous sheet materials using polyester reinforcements
ASTM D6223/D6223M	Standard specification for atactic polypropylene (APP) modified bituminous sheet materials using a combination of polyester and glass fiber reinforcements
ASTM D6226	Standard test method for open cell content of rigid cellular plastics
ASTM D6298	Standard specification for fiberglass reinforced styrene-butadiene-styrene (SBS) modified bituminous sheets with a factory applied metal surface
ASTM D6381/D6381M	Standard test method for measurement of asphalt shingle mechanical uplift resistance
ASTM D6506	Standard specification for asphalt based protection for below-grade waterproofing
ASTM D6509/D6509M	Standard specification for atactic polypropylene (APP) modified bituminous base sheet materials using glass fiber reinforcements
ASTM D6511/D6511M	Standard test methods for solvent bearing bituminous compounds
ASTM D6694	Standard specification for liquid applied silicone coating used in spray polyurethane foam roofing systems
ASTM D6754/D6754M	Standard specification for ketone ethylene ester based sheet roofing



#### International Accreditation Service, Inc.

ASTM D6757/D6757M	Standard specification for underlayment felt containing inorganic fibers used in steep-slope roofing
ASTM D6848	Standard specification for aluminum pigmented emulsified asphalt used as a protective coating for roofing
ASTM D6878/D6878M	Standard specification for thermoplastic polyolefin based sheet roofing
ASTM D6904	Standard Practice for Resistance to Wind-Driven Rain for Exterior Coatings Applied on Masonry
ASTM D6947/D6947M	Standard specification for liquid applied moisture cured polyurethane coating used in spray polyurethane foam roofing system
ASTM D7051	Standard test method for cyclic thermal shock of SBS-modified bituminous roofing sheets with factory-applied metal surface
ASTM D7105	Standard test method for determining the adhesive and cohesive strength between materials in roofing or waterproofing membranes and systems
ASTM D7158/D7158M	Standard test method for wind resistance of asphalt shingles (uplift force/uplift resistance method)
ASTM D7281	Standard test method for determining water migration resistance through roof membranes
ASTM D7311	Standard specification for liquid-applied, single-pack, moisture-triggered, aliphatic polyurethane roofing membrane
ASTM D7349/D7349M	Standard test method for determining the capability of roofing and waterproofing materials to seal around fasteners
ASTM D7379/D7379M	Standard test methods for strength of modified bitumen sheet material laps using cold process adhesive
ASTM D7425/D7425M	Standard specification for spray polyurethane foam used for roofing applications
ASTM D7635/D7635M	Standard test method for measurement of thickness of coatings over fabric reinforcement
ASTM D8052 / D8052M - 17	Standard Test Method for Quantification of Air Leakage in Low-Sloped Membrane Roof Assemblies
ASTM D8257/D8257M	Standard Specification for Mechanically Attached Polymeric Roof Underlayment Used in Steep Slope Roofing
ASTM E8/E8M	Standard test methods for tension testing of metallic materials
ASTM E72	Standard test methods of conducting strength tests of panels for building construction
ASTM E108	Standard Test Methods for Fire Tests of Roof Coverings
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#### International Accreditation Service, Inc.

ASTM E283	Standard test method for determining rate of air leakage through exterior windows, curtain walls, and doors under specified pressure differences across the specimen
ASTM E331	Standard test method for water penetration of exterior windows, skylights, doors, and curtain walls by uniform static air pressure difference
ASTM E546	Standard test method for frost/dew point of sealed insulating glass units
ASTM E547	Standard test method for water penetration of exterior windows, skylights, doors, and curtain walls by cyclic static air pressure difference
ASTM E1646	Standard test method for water penetration of exterior metal roof panel systems by uniform static air pressure difference
ASTM E1680	Standard test method for rate of air leakage through exterior metal roof panel systems
ASTM E1993/E1993M	Standard specification for bituminous water vapor retarders used in contact with soil or granular fill under concrete slabs
ASTM E2134/E2134M	Standard test method for evaluating the tensile-adhesion performance of an exterior insulation and finish system (EIFS)
ASTM E2140	Standard test method for water penetration of metal roof panel systems by static water pressure head
ASTM E2178	Standard test method for air permeance of building
ASTM E2357	Standard test method for determining air leakage of air barrier assemblies materials
CAN/CGSB 37.54	Polyvinyl chloride roofing and waterproofing membrane
CDPH (V1.2)	Standard method for the testing and evaluation of volatile organic chemical emissions from indoor sources using environmental chambers
CGSB 37-GP-52M	Roofing and waterproofing membrane, sheet applied, elastomeric
CGSB 37-GP-56M	Membrane, modified, bituminous, prefabricated, and reinforced for roofing
CSA A123.21	Standard test method for the dynamic wind uplift resistance of membrane-roofing systems
CSA A123.22	Self-adhering polymer modified bituminous sheet materials used as steep roofing underlayment for ice dam protection
ENERGY STAR®	ENERGY STAR® test method for roof products: Maintenance of solar reflectance (Rev 1 March 2016)
ICC-ES AC07	Special roofing systems (test methods referenced in sections 3.0 and 4.0, excluding sections 3.2.5 fire classification and 3.2.9.2.3 quality control for fire classification)



#### International Accreditation Service, Inc.

ICC-ES AC29	Cold, liquid-applied, below-grade, exterior dampproofing and waterproofing materials (test methods referenced in section 3.0)
ICC-ES AC38	Water-resistive barriers (test methods referenced in sections 3.0, 4.0 and 5.0)
ICC-ES AC48	Self-adhered roof underlayments for use as ice barriers (test methods referenced in sections 3.0 and 4.0)
ICC-ES AC71	Foam plastic sheathing panels used as weather-resistive barriers (test methods referenced in sections 3.0)
ICC-ES AC75	Membrane roof-covering systems (test methods referenced in sections 3.0 and 4.0)
ICC-ES AC90	Fiber cement siding used as exterior wall siding (test methods referenced in sections 3.0, 4.0 and 5.0)
ICC-ES AC92	Polymer-based, polymer-modified and high-pressure laminate exterior and interior wall cladding (test methods referenced in sections 3.0 and 4.0, excluding Section 3.4, 3.6, 4.1.2, 4.1.3 and 4.7.1.3)
ICC-ES AC114	Rigid polyethylene, below-grade, dampproofing and wall waterproofing material (test methods referenced in section 4.0 (excluding section 4.10)
ICC-ES AC115	Waterproof membranes for flooring and shower lining (test methods referenced in section 3.0)
ICC-ES AC132	Attic vents (test methods referenced in sections 3.0 and 4.0)
ICC-ES AC148	Flexible flashing materials (test methods referenced in sections 3.0 and 4.0)
ICC-ES AC152	Adhesive attachment of concrete or clay roofing tiles (test methods referenced in sections 3.0 and 4.0)
ICC-ES AC160	Nonasphaltic fiberglass-based roof underlayment (test methods referenced in section 4.0)
ICC-ES AC165	SBS modified asphalt-coated glass-fiber-mat roof underlayment (test methods referenced in section 3.0)
ICC-ES AC188	Roof underlayments (test methods referenced in section 3.0, excluding section 3.3 fire classification)
ICC-ES AC200	Plastic battens used in clay or concrete tile roof systems (test methods referenced in section 4.0)
ICC-ES AC207	Polypropylene roof underlayments (test methods referenced in section 4.0)
ICC-ES AC209	Trowel-, spray- or roller-applied water-resistive coatings used as weather-resistive barriers over exterior cementitious wall coverings (test methods referenced in section 4.0)
ICC-ES AC212	Water-resistive coatings used as water-resistive barriers over exterior sheathing (test methods referenced in sections 3.0 and 4.0)



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ICC-ES AC310	Water-resistive membranes factory-bonded to wood-based structural sheathing, used as water-resistive barriers (test methods referenced in sections 3.0 and 4.0)
ICC-ES AC365	Building-integrated photovoltaic (BIPV) roof covering systems (test methods referenced in sections 3.0 and 4.0, excluding Sections 3.2.2 and 3.3.2)
ISO 11890	Paints and varnishes – determination of volatile organic compound (VOC) content
NFRC 400	Procedure for Determining Fenestration Product Air Leakage
SBCCI SSTD 11-99	Test standard card for determining wind resistance of concrete or clay roof tiles
SPRI Standard GD-1	Structural design standard for gutter systems used with low-slope roofs
TAS 100	Test procedure for wind and wind driven rain resistance of discontinuous roof systems
TAS 100(A)	Test procedure for wind and wind driven rain resistance and/or increased windspeed resistance of soffit ventilation strip and continuous or intermittent ventilation system installed at the ridge area
TAS 101	Test procedure for static uplift resistance of mortar or adhesive set tile systems
TAS 102	Test procedure for static uplift resistance of mechanically attached, rigid roof systems
TAS 103	Test procedure for self-adhered underlayments for use in discontinuous roof systems
TAS 104	Test procedure for nail-on underlayment for use in discontinuous roof systems
TAS 107	Test procedure for wind resistance testing of non-rigid, discontinuous roof system assemblies
TAS 108	Test procedure for wind tunnel testing of air permeable, rigid, discontinuous roof systems
TAS 110	Testing requirements for physical properties of roof membranes, insulation, coatings, and other roofing components
TAS 114	Test procedures for roof system assemblies in the high-velocity hurricane zone jurisdiction (excluding appendices A-C)
TAS 116	Test procedure for air permeability testing of rigid, discontinuous roof systems
TAS 117(A)	Test procedure for withdrawal resistance testing of mechanical fasteners used in roof system assemblies
TAS 117(B)	Test procedure for dynamic pull-through performance of roofing membranes over fastener heads or fasteners with metal bearing plates
TAS 117(C)	Test procedure for dynamic pull-off performance of roofing fastener heads or fasteners with bearing plates



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TAS 121	Standard requirements for testing and approval of roofing adhesives, mastics and coatings
TAS 112	Standard requirements for concrete roof tiles
TAS 123	Standard requirements for mortar used in mortar set tile systems
TAS 125	Standard requirements for metal roofing systems
TAS 131	Standard requirements for thermoplastic olefin elastomer based sheet used in single-ply roof membrane
TAS 135	Standard requirements for fiberglass reinforced tile, shingles or panels and fiber cement shingles, shakes or panels
TAS 138	Standard requirements for aluminum pigmented emulsified asphalt used as a protective coating for roofing
TAS 139	Standard requirements for white roof patch specification
TAS 140	Standard requirements for nonfibered roof and foundation coatings
TAS 143	Standard requirements for white elastomeric roof coatings used for coating built up roofs and metal roofing systems
UL 580	Standard for tests for uplift resistance of roof assemblies
UL 2218	Standard for impact resistance of prepared roof covering materials
Structural	
AAMA/WDMA/CSA 101/ I.S.2/ A440	Standard/Specification for Windows, Doors, and Unit Skylights
ANSI A118.1	Standard specification for standard dry-set cement mortar (Sections 1-12)
ANSI A118.2	Standard specifications for conductive dry-set Portland cement mortar
ANSI A118.3	Standard specification for epoxy grout
ANSI A118.4	Standard specification for modified dry-set cement mortar
ANSI A118.5	Standard specification for furan grouts
ANSI A118.6	Standard specification for cement grouts
ANSI A118.7	Standard specification for polymer modified grouts
ANSI A118.8	Standard specification for modified epoxy emulsion grouts
ANSI A118.9	Standard specifications for test methods and specification for cementitious backer units
ANSI A118.10	Standard specifications for load bearing, bonded, waterproof membranes for thin-set ceramic tile and dimension stone installation



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ANSI A118.11	Standard specifications for EGP (exterior glue plywood) latex-portland cement mortar
ANSI A118.12	Standard specifications for crack isolation membranes for thin-set ceramic tile and dimension stone installation
ASTM C627	Standard test method for evaluating ceramic floor tile installation systems using the Robinson-type floor tester
ASTM C719	Standard test method for adhesion and cohesion of elastomeric joint sealants under cyclic movement (Hockman cycle)
ASTM C1184	Standard specification for structural silicone sealants
ASTM C1325	Standard specification for non-asbestos fiber-mat reinforced cementitious backer units
ASTM C1396/C1396M	Standard specification for gypsum board
ASTM C1523	Standard test method for determining modulus, tear and adhesion properties of precured elastomeric joint sealants
ASTM D543	Standard practices for evaluating the resistance of plastics to chemical reagents
ASTM D1434	Standard test method for determining gas permeability characteristics of plastic film and sheeting
ASTM D5206	Standard test method for windload resistance of rigid plastic siding
ASTM D6769/D6769M	Standard guide for application of fully adhered, cold-applied, prefabricated reinforced modified bituminous membrane waterproofing systems
ASTM E154/E154M	Standard test methods for water vapor retarders used in contact with earth under concrete slabs, on walls, or as ground cover (excluding section 16 flame spread)
ASTM E330/E330M	Standard test method for structural performance of exterior windows, doors, skylights and curtain walls by uniform static air pressure difference
ASTM E564	Standard practice for static load test for shear resistance of framed walls for buildings
ASTM E661	Standard test method for performance of wood and wood-based floor and roof sheathing under concentrated static and impact loads
ASTM E987	Standard test methods for deglazing force of fenestration products
ASTM E1233/E1233M	Standard test method for structural performance of exterior windows, doors, skylights, and curtain walls by cyclic air pressure differential
ASTM E1592	Standard test method for structural performance of sheet metal roof and siding systems by uniform static air pressure difference
ASTM E1677	Standard specification for air barrier (AB) material or system for low-rise framed building walls



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ASTM E1745	Standard specification for plastic water vapor retarders used in contact with soil or granular fill under concrete slabs
ASTM E1886	Standard test method for performance of exterior windows, curtain walls, doors, and impact protective systems impacted by missile(s) and exposed to cyclic pressure differentials
ASTM E1996	Standard specification for performance of exterior windows, curtain walls, doors, and impact protective systems impacted by windborne debris in hurricanes
ASTM E2068	Standard test method for determination of operating force of sliding windows and doors
ASTM F476	Standard test methods for security of swinging door assemblies
ASTM F588	Standard test methods for measuring the forced entry resistance of window assemblies, excluding glazing impact
ASTM F842	Standard test methods for measuring the forced entry resistance of sliding door assemblies, excluding glazing impact
CAN/ULC S742	Standard for air barrier assemblies – specification
CSA A440 S1	Specification for windows, doors, and skylights
DASMA 108	Standard method for testing sectional garage doors and rolling doors: determination of structural performance under uniform static air pressure difference
FM 4450	Standard for class 1 insulated steel deck roofs
FM 4470	Single-ply, polymer-modified bitumen sheet, built-up roof (BUR) and liquid applied roof assemblies for use in class 1 and noncombustible roof deck construction
FM 4471	Class 1 panel roofs (excluding sections 4.1 and 4.2)
ICC-ES AC65	Concrete and clay roof tile fasteners (test methods referenced in section 3.0)
ICC-ES AC166	Metal roof coverings (test methods referenced in sections 3.0 and 4.0, excluding section 3.1.11 fire classification)
ICC-ES AC257	Corrosion-resistant fasteners and evaluation of corrosion effects of wood treatment chemicals (test methods referenced in sections 3.0 and 4.0)
ICC-ES AC318	Structural cementitious floor and roof sheathing panels (test methods referenced in section 3.0)
CPSC CFR 16 1201	Safety Standard for Architectural Glazing Materials
CAN/CGSB-12.1	Safety glazing
Thermal	
AAMA 505	Dry shrinkage and composite performance thermal cycling test procedure
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AAMA 920	Specification for operating cycle performance of active side-hinged exterior door slabs
AAMA 925	Specification for determining the vertical loading resistance of side-hinged door leaves
AAMA 1304	Voluntary specification for forced entry resistance of side-hinged door systems
AAMA 1701.2	Voluntary standard for utilization in manufactured housing for primary windows and sliding glass doors
AAMA 1702.2	Voluntary standard for utilization in manufactured housing for swinging exterior passage doors
ANSI Z97	Safety glazing materials used in buildings
ANSI/SPRI ES-1	Wind design standard for edge systems used with low slope roof systems
ASTM C165	Standard test method for measuring compressive properties of thermal insulations
ASTM C203	Standard test methods for breaking load and flexural properties of block-type thermal insulation
ASTM C208	Standard specification for cellulosic fiber insulating board
ASTM C209	Standard test methods for cellulosic fiber insulating board
ASTM C272/C272M	Standard test method for water absorption of core materials for sandwich constructions
ASTM C303	Standard test method for dimensions and density of preformed block and board-type thermal insulation
ASTM C518	Standard test method for steady-state thermal transmission properties by means of the heat flow meter apparatus
ASTM C578	Standard specification for rigid, cellular polystyrene thermal insulation
ASTM C726	Standard specification for mineral wool roof insulation board
ASTM C728	Standard specification for perlite thermal insulation board
ASTM C920	Standard specification for elastomeric joint sealants
ASTM C947	Standard test method for flexural properties of thin-section glass-fiber-reinforced concrete (using simple beam with third-point loading)
ASTM C961	Standard test method for lap shear strength of sealants
ASTM C1029	Standard specification for spray-applied rigid cellular polyurethane thermal insulation
ASTM C1177/C1177M	Standard specification for glass mat gypsum substrate for use as sheathing



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ASTM C1289	Standard specification for faced rigid cellular polyisocyanurate thermal insulation board
ASTM C1303/C1303M	Standard test method for predicting long-term thermal resistance of closed-cell foam insulation
CAN/ULC S770	Standard test method for determination of long-term thermal resistance of closed-cell thermal insulating foams
ICC-ES AC12	Foam plastic insulation (test methods referenced in sections 3.0 and 4.0, (excluding sections 3.1, 3.2, 3.3, 3.6, 4.2.1, 4.2.2, 4.3.4, 4.4.1, 4.4.4, 4.5.2 and 4.5.4)
ICC-ES AC377	Spray-applied foam plastic insulation (test methods referenced in section 3.0, excluding sections 3.1.4, 3.1.5, 3.2.1, 3.3, 3.7 and 3.11)
ICC-ES AC386	Fiber-reinforced magnesium-oxide-based sheets (test methods referenced in section 3.0, excluding sections 3.1.7, 3.1.8, 3.1.11, 3.5 and 3.6)
ICC IBC 500	Standard for the design and construction of storm shelters
NFRC 100	Procedure for Determining Fenestration Product U-Factors
NFRC 200	Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence
NFRC 500	Procedure for Determining Fenestration Product Condensation Resistance Values
SBCCI SSTD 12	Test standard for determining impact resistance from windborne debris
TAS 201	Impact test procedures
TAS 202	Criteria for testing impact and non impact resistant building envelope components using uniform static air pressure
TAS 203	Criteria for testing products subject to cyclic wind pressure loading
WDMA IS 11	Analytical method for design pressure rating of fenestration

AAMA: American Architectural Manufacturers Association

ASPE: American Society of Plumbing Engineers

BHMA: Builders Hardware Manufacturers Association

CGSB: Canadian General Standards Board

CRRC: Cool Roof Rating Council

DASMA: Doors & Access Systems Manufacturers Association

FM: Factory Mutual

SBCCI: Southern Building Code Congress International







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SPRI: Single Ply Roofing Industry

TAS: Testing Application Standards (Miami-Dade County Protocol)

UL: Underwriters Laboratories

ULC: Underwriters Laboratories Canada

WDMA: Window and Door Manufacturer Association

UL 790: Standard for standard test methods for fire tests of roof coverings

ENERGY STAR test methods for roofing products: Maintenance of solar reflectance



