



INTERNATIONAL  
ACCREDITATION  
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# CERTIFICATE OF ACCREDITATION

*This is to attest that*

**TI RADCO, LLP dba RADCO A TWINING COMPANY**

3220 EAST 59TH STREET  
LONG BEACH, CALIFORNIA 90805

Testing Laboratory TL-209

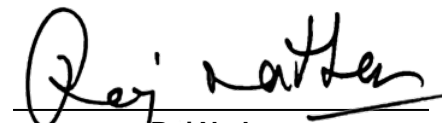
has met the requirements of AC89, IAS Accreditation Criteria for Testing Laboratories, and has demonstrated compliance with ISO/IEC Standard 17025:2005, General requirements for the competence of testing and calibration laboratories. This organization is accredited to provide the services specified in the scope of accreditation maintained on the IAS website ([www.iasonline.org](http://www.iasonline.org)).

*This certificate is valid up to December 1, 2021.*



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Raj Nathan  
President



# SCOPE OF ACCREDITATION

IAS Accreditation Number	TL-209
Company Name	TI RADCO, LLP dba RADCO A Twining Company
Address	3220 East 59th Street Long Beach, California 90805
Contact Name	Alejandro Contreras, Testing Lab Director
Telephone	(562) 272-7231
Effective Date of Scope	September 16, 2019
Accreditation Standard	ISO/IEC 17025: 2005

## Conformity Specifications

ASTM E699 Standard specification for agencies involved in testing, quality assurance, and evaluating of manufactured building components (part A only)

## Electrical

NFPA 79 Electrical standard for industrial machinery (in laboratory or in-situ evaluation)

NSF 2 Food equipment (excluding clause 6.1)

NSF 4 Commercial cooking, rethermalization and powered hot food holding and transport equipment

NSF 7 Commercial refrigerators and freezers

NSF 8 Commercial powered food preparation equipment

NSF 59 Mobile food carts

UL 197 Standard for commercial electric cooking appliances

UL 234 Standard for low voltage lighting fixtures for use in recreational vehicles

UL 508A Standard for industrial control panels

UL 1083 Household electric skillets and frying-type appliances

## Fire

1997 UBC 26-3 Room fire test standard for interior of foam plastic systems

ASTM D635 Standard test method for rate of burning and/or extent and time of burning of plastics in a horizontal position

NFPA 33 Standard for spray application using flammable or combustible materials



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NFPA 85	Boiler and combustion systems hazards code
NFPA 86	Standard for ovens and furnaces
NFPA 160	Standard for the use of flame effects before an audience
NFPA 1123	Code for fireworks display
NFPA 1126	Standard for the use of pyrotechnics before a proximate audience
UL 1091	Standard for butterfly valves for fire-protection service
<b>Heating/Cooling</b>	
AGA Requirement 8-96	Requirement for gas-fired decorative illuminating appliances for outdoor installation
ANSI Z21.1	Household cooking gas appliances
ANSI Z21.5.1	Gas clothes dryers - volume 1, type 1 clothes dryers
ANSI Z21.5.2	Gas clothes dryers, volume II, type 2 clothes dryers
ANSI Z21.8	Installation of domestic gas conversion burners
ANSI Z21.10.1	Gas water heaters, volume I, storage water heaters with input ratings of 75,000 Btu per hour or less
ANSI Z21.10.3	Gas water heaters, volume III, storage water heaters with input ratings above 75,000 Btu per hour, circulating and instantaneous
ANSI Z21.11.2	Gas-fired room heaters, volume II, unvented room heaters
ANSI Z21.12	Draft hoods
ANSI Z21.13	Gas-fire low pressure steam and hot water boilers
ANSI Z21.19	Refrigerators using gas fuel
ANSI Z21.40.1	Gas-fired – heat activated air conditioning and heat pump appliances
ANSI Z21.40.2	Gas-fired – work activated air-conditioning and heat pump appliances
ANSI Z21.42	Gas-fired illuminating appliances
ANSI Z21.47	Standard for gas-fired central furnaces
ANSI Z21.50	Vented gas fireplaces
ANSI Z21.56	Gas-fired pool heaters
ANSI Z21.57	Recreational vehicle cooking gas appliances



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ANSI Z21.58	Outdoor cooking gas appliances
ANSI Z21.60	Decorative gas appliances for installation in solid-fuel burning fireplaces
ANSI Z21.61	Gas-fired toilets
ANSI Z21.63	Portable type gas camp heaters
ANSI Z21.72	Portable type gas camp stoves
ANSI Z21.73	Portable type gas camp lights
ANSI Z21.74	Portable refrigerators for use with HD-5 propane gas
ANSI Z21.84	Standard for manually lighted, natural gas, decorative gas appliances for installation in solid-fuel burning fireplaces
ANSI Z21.86	Vented gas-fired space heating appliances
ANSI Z21.88	Vented gas fireplace heaters
ANSI Z21.89	Outdoor cooking specialty gas appliances
ANSI Z21.97	Outdoor decorative gas appliances
ANSI Z83.4	Non-recirculating direct gas-fired industrial air heaters
ANSI Z83.7	Gas-fired construction heaters
ANSI Z83.8	Gas unit heaters, gas packed heaters, gas utility heaters and gas-fired duct furnaces
ANSI Z83.11	Gas good service equipment
ANSI Z83.18	Recirculating direct gas-fired industrial air heaters
ANSI Z83.19	Gas-fired high-intensity infrared heaters
ANSI Z83.20	Gas-fired low-intensity infrared heaters
ANSI Z83.25	Direct gas-fired process air heaters
ANSI Z83.26	Gas-fired outdoor infrared patio heaters
ASTM C518	Standard test method for steady-state thermal transmission properties by means of the heat flow meter apparatus
UL 103	Standard for factory-built chimneys for residential type and building heating appliances
UL 127	Standard for factory-built fireplaces
UL 181	Standard for factory-made air ducts and air connectors



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UL 295	Standard for commercial-industrial gas burners
UL 307A	Standard for liquid fuel-burning heating appliances for manufactured homes and recreational vehicles
UL 307B	Standard for gas-burning heating appliances for manufactured homes and recreational vehicles
UL 441	Standard for gas vents
UL 471	Standard for commercial refrigerators and freezers
UL 737	Standard for fireplace stoves
UL 795	Standard for commercial-industrial gas heating equipment (only sections 45.23-45.51)
UL 1046	Standard for grease filters for exhaust ducts
UL 1075	Standard for safety gas-fired cooking appliances for recreational vehicles
UL 1995	Heating and cooling equipment
<b>Physical</b>	
AATCC 127	Water resistance: hydrostatic pressure test
AISI TS-4	Standard test methods for determining the tensile and shear strength of screws
ASTM A90/A90M	Standard test method for weight (mass) of coating on iron and steel articles with zinc or zinc-alloy coatings
ASTM B117	Standard practice for operating salt spray (fog) apparatus
ASTM C97/C97M	Standard test methods for absorption and bulk specific gravity of dimension stone
ASTM C109/C109M	Standard test method for compressive strength of hydraulic cement mortars (using 2-in. or (50-mm) cube specimens)
ASTM C190	Method of test for tensile strength of hydraulic cement mortars
ASTM C271/C271M	Standard test method for density of sandwich core materials
ASTM C272	Standard test method for water absorption of core materials for sandwich constructions
ASTM C282	Standard test method for acid resistance of porcelain enamels (citric acid spot test)



# SCOPE OF ACCREDITATION

ASTM C297	Standard test method for flatwise tensile strength of sandwich constructions
ASTM C303	Standard test method for dimensions and density of preformed block and board-type thermal insulation
ASTM C348	Standard test method for flexural strength of hydraulic-cement mortars
ASTM C365	Standard test method for flatwise compressive properties of sandwich cores
ASTM C473	Standard test methods for physical testing of gypsum panel products
ASTM C481	Standard test method for laboratory aging of sandwich constructions
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 C578	Standard specification for rigid, cellular polystyrene thermal insulation
ASTM C591	Standard specification for unfaced preformed rigid cellular polyisocyanurate thermal insulation
ASTM C794	Standard test method for adhesion-in-peel of elastomeric joint sealants
ASTM C1289	Standard specification for faced rigid cellular polyisocyanurate
ASTM C1386	Standard specification for precast autoclaved aerated concrete (AAC) wall construction units
ASTM D146/D146M	Standard test methods for sampling and testing bitumen-saturated felts and woven fabrics for roofing and waterproofing
ASTM C1568	Standard test method for wind resistance of concrete and clay roof tiles (mechanical uplift resistance method)
ASTM D226/D226M	Standard specification for asphalt-saturated organic felt used in 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



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ASTM D471	Standard test method for rubber property- effect of liquids
ASTM D570	Standard test method for water absorption of plastics
ASTM D572	Standard test method for rubber – deterioration by heat and oxygen
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 D638	Standard test method for tensile properties of plastics
ASTM D648	Standard test method for deflection temperature of plastics under flexural load in the edgewise position
ASTM D696	Standard test method for coefficient of linear thermal expansion of plastics between -30°C and 30°C with a vitreous silica dilatometer
ASTM D751	Standard test methods for coated fabrics
ASTM D756	Practice for determination of weight and shape changes of plastics under accelerated service conditions
ASTM D779	Standard test method for determining the water vapor resistance of sheet materials in contact with liquid water by the dry indicator method
ASTM D781	Method of test for puncture and stiffness of paperboard, corrugated and solid fiberboard
ASTM D790	Standard test methods for flexural properties of unreinforced and reinforced plastics and electrical insulating materials
ASTM D792	Standard test methods for density and specific gravity (relative density) of plastics by displacement
ASTM D816	Standard test methods for rubber cements
ASTM D828	Standard test method for tensile properties of paper and paperboard using constant-rate-of-elongation apparatus
ASTM D882	Standard test method for tensile properties of thin plastic sheeting
ASTM D896	Standard practice for resistance of adhesive bonds to chemical reagents
ASTM D903	Standard test method for peel or stripping strength of adhesive bonds





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ASTM D905	Standard test method for strength properties of adhesive bonds in shear by compression loading
ASTM D1002	Standard test method for apparent shear strength of single-lap joint adhesively bonded metal specimens by tension loading (metal-to-metal)
ASTM D1042	Standard test method for linear dimensional changes of plastics caused by exposure to heat and moisture
ASTM D1183	Standard practices for resistance of adhesives to cyclic laboratory aging conditions
ASTM D1204	Standard test method for linear dimensional changes of nonrigid thermoplastic sheeting or film at elevated temperature
ASTM D1212	Standard test methods for measurement of wet film thickness
ASTM D1248	Standard specification for polyethylene plastics extrusion materials for wire and cable
ASTM D1333	Methods of testing elastic fabrics
ASTM D1435	Standard practice for outdoor weathering of plastics
ASTM D1499	Standard practice for filtered open-flame carbon-arc exposures of plastics
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 D1876	Standard test method for peel resistance of adhesives (t-peel test)
ASTM D1938	Standard test method for tear-propagation resistance (trouser tear) of plastic film and thin sheeting by a single-tear method
ASTM D1970	Standard specification for self-adhering polymer modified bituminous sheet materials used as steep roofing underlayment for ice dam protection
ASTM D2126	Standard test method for response of rigid cellular plastics to thermal and humid aging
ASTM D2247	Standard practice for testing water resistance of coatings in 100% relative humidity





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ASTM D2261	Standard test method for tearing strength of fabrics by the tongue (single rip) procedure (constant-rate-of-extension tensile testing machine)
ASTM D2294	Standard test method for creep properties of adhesives in shear by tension loading (metal-to-metal)
ASTM D2299	Recommended practice for determining relative stain resistance of plastics
ASTM D2842	Standard test method for water absorption of rigid cellular plastics
ASTM D2863	Standard test method for measuring the minimum oxygen concentration to support candle-like combustion of plastics (oxygen index)
ASTM D3345	Standard test method for laboratory evaluation of wood and other cellulosic materials for resistance to termites
ASTM D4317	Standard specification for polyvinyl acetate-based emulsion adhesives
ASTM D4533	Standard test method for trapezoid tearing strength of geotextiles
ASTM D4869/D4969M	Standard specification for asphalt-saturated organic felt underlayment used in steep slope roofing
ASTM D5034	Standard test method for breaking strength and elongation of textile fabrics (grab test)
ASTM D5733	Standard test method for tearing strength of nonwoven fabrics by the trapezoid procedure
ASTM D5764	Standard test method for evaluating dowel-bearing strength of wood and wood-based products
ASTM D5795	Standard test method for determination of liquid water absorption of coated hardboard and other composite wood products via "cobb ring" apparatus
ASTM D6662	Standard specification for polyolefin-based plastic lumber decking boards
ASTM D6817/D6817M	Standard specification for rigid cellular polystyrene geofoam
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



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ASTM E96/E96M	Standard test methods for water vapor transmission of materials
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 E330	Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference
ASTM E331	Standard test method for water penetration of exterior windows, skylights, doors, and curtain walls by uniform static air pressure difference
ASTM E529	Standard guide for conducting flexural tests on beams and girders for building construction
ASTM E547	Standard test method for water penetration of exterior windows, skylights, doors, and curtain walls by cyclic static air pressure difference
ASTM E1333	Standard test method for determining formaldehyde concentrations in air and emission rates from wood products using a large chamber
ASTM E2098/E2098M	Standard test method for determining tensile breaking strength of glass fiber reinforcing mesh for use in class PB exterior insulation and finish systems (EIFS), after exposure to a sodium hydroxide solution
ASTM E2134/E2134M	Standard test method for evaluating the tensile-adhesion performance of an exterior insulation and finish system (EIFS)
ASTM E2178	Standard test method for air permeance of building materials
ASTM E2273	Standard test method for determining the drainage efficiency of exterior insulation and finish systems (EIFS) clad wall assemblies
ASTM E2322	Standard Test method for Conducting Transverse and Concentrated Load Tests on Panels used in Floor and Roof Construction
ASTM E2485/E2485M	Standard test method for freeze/thaw resistance of exterior insulation and finish systems (EIFS) and water resistive barrier coatings
ASTM E2486/E2486M	Standard test method for impact resistance of class PB and PI exterior insulation and finish systems (EIFS)
ASTM E2568	Standard specification for pb exterior insulation and finish systems



# SCOPE OF ACCREDITATION

ASTM E2570/E2570M	Standard test methods for evaluating water-resistive barrier (WRB) coatings used under exterior insulation and finish systems (EIFS) or EIFS with drainage
ASTM G21	Standard practice for determining resistance of synthetic polymeric materials to fungi
ASTM G23	Practice for operating light-exposure apparatus (carbon arc type) with and without water for exposure of nonmetallic materials
ASTM G26	Practice for operating light-exposure apparatus (xenon arc type) with and without water for exposure of nonmetallic materials
ASTM G53	Practice for operating light- and water- exposure apparatus (florescent UV-condensation type) for exposure of nonmetallic materials
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
AWPA E1	Laboratory methods for evaluating the termite resistance of wood-based materials: choice and no-choice tests
FMVSS 217	Bus emergency exits and window retention and release
ICC ES AC38	Water-resistive barriers (test methods referenced in sections 3.0 and 4.0)
ICC ES AC48	Self-adhered roof underlayments for use as ice barriers (test methods referenced in sections 3.0 and 4.0)
ICC ES AC59	Direct-applied exterior finish systems (DEFS) (flexural test, water absorption, freeze-thaw, bond test and environmental cycling only) (test method referenced in sections 3.1.2.1, 3.1.2.3, 3.1.2.7, 5.2, 5.3 and 5.4.3)
ICC ES AC180	Clay and concrete roof tiles (uplift bend test only)(test methods referenced in section 3.4)
ICC ES AC212	Water-resistive coatings used as water-resistive barriers over exterior sheathing (test methods referenced in sections 3.0 and 4.0)
<b>Plumbing</b>	
ANSI A112.14.1	Backwater valves
ANSI A112.18.1M	Plumbing fixture fittings



# SCOPE OF ACCREDITATION

ANSI A112.19.2M	Vitreous china plumbing fixtures
ANSI A112.19.3	Stainless steel plumbing fixtures
ANSI A112.19.6	Hydraulic requirements for water closets and urinals
ANSI A112.36.2M	Cleanouts
ANSI B16.3	Malleable iron threaded fittings
ANSI B16.4	Cast iron threaded fittings
ANSI B16.12	Cast iron threaded drainage fittings
ANSI B16.15	Cast bronze threaded fittings
ANSI B16.18	Cast copper alloy solder joint pressure fittings
ANSI B16.22	Wrought copper and copper alloy solder joint pressure fittings
ANSI B16.23	Cast copper alloy solder joint drainage fittings (DWV)
ANSI B16.24	Cast copper alloy pipe flanges and flanged fittings
ANSI B16.26	Cast copper alloy fittings for flared copper tubes
ANSI B16.29	Wrought copper and wrought copper alloy solder joint drainage fittings (DWV)
ANSI Z124.1	Plastic bathtub units
ANSI Z124.2	Plastic shower receptors and shower stalls
ANSI Z124.3	Plastic lavatories
ANSI Z124.4	Plastic water closet bowls and tanks
ANSI Z124.6	Plastic sinks
ANSI/ASME A112.19.1M	Enameled cast-iron plumbing fixtures
ANSI/ASME A112.19.4M	Porcelain enameled formed steel plumbing fixtures
ANSI/ASME B1.20.1	Pipe threads, general purpose (inch)
ANSI/ASSE 1002	Water closet flush tank fill valves
ANSI/ASSE 1019	Vacuum breaker wall hydrant-frost resistant automatic draining type
ANSI/ASSE 1037	Pressurized flushing devices for plumbing fixtures
ASME A112.1.2	Air gaps in plumbing systems (for plumbing fixtures and water-connected receptors)



# SCOPE OF ACCREDITATION

ASME A112.6.1M	Floor-affixed supports for off-the-floor plumbing fixtures for public use
ASME A112.19.5	Flush valves and spuds for water closets, urinals, and tanks
ASME A112.19.7M	Whirlpool bathtub appliances
ASME A112.19.9M	Non-vitreous ceramic plumbing fixtures
ASME A112.21.1M	Floor drains
ASME A112.21.2M	Roof drains
ASSE 1001	Performance requirements for pipe applied atmospheric type vacuum breakers
ASSE 1003	Performance requirements for water pressure reducing valves for domestic water distribution systems
ASSE 1005	Performance requirements for water heater drain valves ¾ inch size
ASSE 1011	Performance requirements for hose connection vacuum breaker
ASSE 1012	Performance requirements for backflow preventers with an intermediate atmospheric vent
ASSE 1013	Performance requirements for reduced pressure principle backflow preventers and reduced pressure principle fire protection backflow preventers
ASSE 1014	Performance requirements for backflow prevention devices for hand-held showers
ASSE 1015	Performance requirements for double check backflow prevention assemblies and double check fire protection backflow prevention assemblies
ASSE 1020	Performance requirements for pressure vacuum breaker assembly
ASSE 1024	Performance requirements for dual check backflow preventers
ASSE 1025	Performance requirements for diverters for plumbing faucets with hose spray, anti-siphon type, residential applications
ASSE 1032	Performance requirements for dual check valve type backflow preventers for carbonated beverage dispensers, post mix type
ASSE 1035	Performance requirements for laboratory faucet backflow preventers



# SCOPE OF ACCREDITATION

ASSE 1047	Performance requirements for reduced pressure detector fire protection backflow prevention assemblies
ASSE 1048	Performance requirements for double check detector fire protection backflow prevention assemblies
ASSE 1050	Performance requirements for stack air admittance valves for sanitary drainage systems
ASSE 1051	Performance requirements for individual and branch type air admittance valves for sanitary drainage systems
ASSE 1052	Performance requirements for hose connection backflow preventers
ASTM A74	Standard specification for cast iron soil pipe and fittings
ASTM A126	Standard specification for gray iron castings for valves, flanges, and pipe fittings
ASTM A438	Standard test method for transverse testing of gray cast iron
ASTM B306	Standard specification for copper drainage tube (DWV)
ASTM C296/C296M	Standard specification for asbestos-cement pressure pipe
ASTM C564	Standard specification for rubber gaskets for cast iron soil pipe and fittings
ASTM D380	Standard test methods for rubber hose
ASTM D1527	Standard specification for acrylonitrile-butadiene-styrene (ABS) plastic pipe, schedules 40 and 80
ASTM D1784	Standard specification for rigid poly (vinyl chloride) (PVC) compounds and chlorinated poly (vinyl chloride) (CPVC) compounds
ASTM D1785	Standard specification for poly (vinyl chloride)(PVC) plastic pipe, schedules 40, 80, and 120
ASTM D1788	Specification for rigid acrylonitrile-butadiene-styrene (ABS) plastic
ASTM D2239	Standard specification for polyethylene (PE) plastic pipe (SIDR-PR) based on controlled inside diameter
ASTM D2241	Standard specification for poly (vinyl chloride) (PVC) pressure-rated pipe (SDR series)
ASTM D2282	Standard specification for acrylonitrile butadiene-styrene (ABS) plastic pipe



# SCOPE OF ACCREDITATION

ASTM D2464	Standard specification for threaded poly (vinyl chloride) (PVC) plastic pipe fittings, schedule 80
ASTM D2466	Standard specification for poly (vinyl chloride) (PVC) plastic pipe fittings, schedule 40
ASTM D2467	Standard specification for poly (vinyl chloride) (PVC) plastic pipe fittings, schedule 80
ASTM D2468	Standard specification for acrylonitrile-butadiene-styrene (ABS) plastic pipe fittings, schedule 40
ASTM D2609	Standard specification for plastic insert fittings for polyethylene (PE) plastic pipe
ASTM D2661	Standard specification for acrylonitrile-butadiene-styrene (ABS) schedule 40 plastic drain, waste, and vent pipe and fittings
ASTM D2662	Standard specification for polybutylene (PB) plastic pipe (SIDR-PR) based on controlled inside diameter
ASTM D2666	Standard specification for polybutylene (PB) plastic tubing
ASTM D2737	Standard specification for polyethylene (PE) plastic tubing
ASTM D2751	Standard specification for acrylonitrile-butadiene-styrene (ABS) sewer pipe and fittings
ASTM D2846	Standard specification for chlorinated poly (vinyl chloride) (CPVC) plastic hot- and cold-water distribution systems
ASTM D3034	Standard specification for type PSM poly (vinyl chloride) (PVC) sewer pipe and fittings
ASTM D3309	Standard specification for polybutylene (PB) plastic hot and cold-water distribution systems
ASTM D3311	Standard specification for drain, waste, and vent (DWV) plastic fittings patterns
ASTM D3350	Standard specification for polyethylene plastics pipe and fittings materials
ASTM D3965	Standard classification system and basis for specifications rigid acrylonitrile-butadiene-styrene (ABS) materials for pipe and fittings
ASTM D4396	Standard specification for rigid poly (vinyl chloride) (PVC) and chlorinated poly (vinyl chloride) (CPVC) compound for plastic pipe and fittings used in nonpressure applications





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ASTM D4477	Standard specification for rigid (unplasticized) poly (vinyl chloride) (PVC) soffit
ASTM E1105	Field Determination of Water penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform or Cyclic Static Air Pressure Difference
ASTM E2357	Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
ASTM F409	Standard specification for thermoplastic accessible and replaceable plastic tube and tubular fittings
ASTM F438	Standard specification for socket-type chlorinated poly(vinyl chloride) (CPVC) plastic pipe fittings, schedule 40
ASTM F439	Standard specification for chlorinated poly (vinyl Chloride) (CPVC) plastic pipe fittings, schedule 80
ASTM F441/F441M	Standard specification for chlorinated poly (vinyl chloride) (CPVC) plastic pipe, schedules 40 and 80
ASTM F628	Standard specification for acrylonitrile-butadiene-styrene (ABS) schedule 40 plastic drain, waste, and vent pipe with a cellular core
ASTM F789	Standard specification for type ps-46 and type ps-115 poly (vinyl chloride) (PVC) plastic gravity flow sewer pipe and fittings
ASTM F810	Standard specification for smoothwall polyethylene (PE) pipe for use in drainage and waste disposal absorption fields
ASTM F845	Standard specification for plastic insert fittings for polybutylene (PB) tubing
ASTM F876	Standard specification for crosslinked polyethylene (PEX) tubing
ASTM F877	Standard specification for crosslinked polyethylene (PEX) hot- and cold-water distribution systems
ASTM F891	Standard specification for coextruded poly (vinyl chloride) (PVC) plastic pipe with a cellular core
ASTM F949	Standard specification for poly (vinyl chloride) (PVC) corrugated sewer pipe with a smooth interior and fittings
ASTM F1281	Standard specification for crosslinked polyethylene/ aluminum/crosslinked polyethylene (PEX-AL-PEX) pressure pipe
ASTM F1282	Standard specification for polyethylene/aluminum/ polyethylene (PE-AL-PE) composite pressure pipe



# SCOPE OF ACCREDITATION

## Structural

1997 UBC 14-1	Kraft waterproof building paper
1997 UBC 14-2	Vinyl siding
1997 UBC 15-5	Roof tile
1997 UBC 15-6	Modified bitumen, thermoplastic and thermoset membranes used for roof coverings
1997 UBC 21-6	In-place masonry shear tests
1997 UBC 21-7	Test of anchors in unreinforced
AAMA 501.2-15	Quality Assurance and Diagnostic Water leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems
AAMA 2605-05	Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels
ACI 355.2	Qualification of post-installed mechanical anchors in concrete and commentary (except chapter 4 and sections 8.6, 9.6 and 9.7)
ACI 355.4	Qualification of post-installed adhesive anchors in concrete (Except sections 7.15, 7.16, 8.6, 8.12, and 8.13)
AISI S909	Test Standard for Determining the Web Crippling Strength of Cold-Formed Steel Flexural Members (Excluding ASTM A370)
ANSI/AAMA 711	Voluntary specification for self-adhering flashing used for installation of exterior wall fenestration products
ANSI/AAMA 1402	Standard specifications for aluminum siding, soffit and fascia
AS/NZS 4256	Plastic roof and wall cladding materials
AS/NZS 4257	Plastic roof and wall cladding materials – methods of test
ASTM A792/A792M	Standard specification for steel sheet, 55% aluminum-zinc alloy-coated by the hot-dip process
ASTM C67	Standard test methods for sampling and testing brick and structural clay tile
ASTM C203	Standard test methods for breaking load and flexural properties of block-type thermal insulation
ASTM C209	Standard test methods for cellulosic fiber insulating board



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ASTM C273/C273M	Standard test method for shear properties of sandwich core materials
ASTM C393	Standard test method for core shear properties of sandwich construction by beam flexure
ASTM C1167	Standard specification for clay roof tiles
ASTM C1185	Standard test methods for sampling and testing non-asbestos fiber-cement flat sheet, roofing and siding shingles, and clapboards
ASTM C1186	Standard specification for flat fiber-cement sheets
ASTM D1037	Standard test methods for evaluating properties of wood-base fiber and particle panel materials
ASTM D1682	Standard methods of test for breaking load and elongation of textile fabrics
ASTM D1761	Standard test methods for mechanical fasteners in wood
ASTM D2523	Standard practice for testing load-strain properties of roofing membranes
ASTM D2581	Standard specification for polybutylene (PB) plastics molding and extrusion materials
ASTM D3330	Standard test method for peel adhesion of pressure-sensitive tape
ASTM D3679	Standard specification for rigid poly (vinyl chloride) (PVC) siding
ASTM D3930	Standard specification for adhesives for wood-based materials for construction of manufactured homes
ASTM D4226	Standard test methods for impact resistance of rigid poly (vinyl chloride) (PVC) building products
ASTM D4632/D4632M	Standard test method for grab breaking load and elongation of geotextiles
ASTM D5147	Standard test methods for sampling and testing modified bituminous sheet material
ASTM D5206	Standard test method for windload resistance of rigid plastic siding
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)



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ASTM D5456	Standard specification for evaluation of structural composite lumber products
ASTM D6117	Standard test methods for mechanical fasteners in plastic lumber and shapes
ASTM E330/E330M	Standard test method for structural performance of exterior windows, doors, skylights and curtain walls by uniform static air pressure difference
ASTM E488/E488M	Standard test methods for strength of anchors in concrete elements
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 E695	Standard test method of measuring relative resistance of wall, floor, and roof construction to impact loading
ASTM E1190	Standard test methods for strength of power-actuated fasteners installed in structural members
ASTM E1233/E1233M	Standard test method for structural performance of exterior windows, doors, skylights, and curtain walls by cyclic air pressure differential
ASTM E1512	Standard test methods for testing bond performance of bonded anchors
ASTM E1677	Standard specification for air barrier (AB) material or system for low-rise framed building walls
ASTM E2126	Standard Test Methods for Cyclic (Reversed) Load Test for shear Resistance of Vertical Elements of the Lateral Force Resisting Systems for Buildings
ASTM F1575	Standard test method for determining bending yield moment of nails
ASTM F1667	Standard specification for driven fasteners: nails, spikes, and staples
CAN/CSGB 41.24	Rigid vinyl siding, soffits and fascia
CAN/CSGB 51.26-M86	Thermal insulation, urethane and isocyanurate, boards, faced
CAN/CSGB 51.32-M77	Sheathing, membrane, breather type



# SCOPE OF ACCREDITATION

CAN/ULC-S701	Standard for thermal insulation, polystyrene, boards and pipe covering
ICC ES AC01	Expansion anchors in masonry elements (test methods referenced in section 5.0)
ICC ES AC04	Sandwich panels (test methods referenced in section 4.0)
ICC ES AC07	Special roofing systems (test methods referenced in sections 3.0, 4.0, 4.3, 4.5, 4.7, 4.8 and 4.9)
ICC ES AC11	Cementitious exterior wall coatings (test methods referenced in sections 4.2, 4.3 and 4.8)
ICC ES AC16	Plastic glazed skylights (burning brand only) (test methods referenced in sections A3.5, A3.9, A4.2, A4.3 and A4.4)
ICC ES AC51	Precast stone veneer (test methods referenced in sections 3.1.1, 3.1.2, 3.1.3, 3.1.4, 3.1.5, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7)
ICC ES AC58	Adhesive anchors in masonry elements (test methods referenced in section 4.0)
ICC ES AC70	Power-actuated fasteners driven into concrete, steel and masonry elements (test methods referenced in section 4.0)
ICC ES AC106	Predrilled fasteners (screw anchors) in masonry (test methods referenced in section 4.0)
ICC ES AC193	Mechanical anchors in concrete elements (test methods referenced in section 4.0, tables 4.1, 4.2 and 4.3, except method B embrittlement tests)
ICC ES AC308	Post-installed adhesive anchors in concrete elements (test methods referenced in tables 4.1, 4.2, 4.3 and 4.4 (except sections 8.16 - table 4.2 (test no.5), table 4.3 (test no. 5), table 4.4 (test no.5), 9.12 - table 4.2 (test no.17), table 4.3 (test no. 17) and tables 4.4 (test no. 16) and 9.13 - table 4.2 (test no.18), table 4.3 (test no. 18) and table 4.4 (test no.17))
ICC ES AC310	Water-resistive membranes factory-bonded to wood-based structural sheathing, used as water-resistive barriers (test methods referenced in section 4.0)
ICC ES AC358	Helical pile systems and devices (test methods referenced in section 4.0)
ICC ES AC394	Structural capacity of components of work cages for wind turbine towers (test methods referenced in section 3.0)
SBCCI SSTD 11	Test standard for determining wind resistance of concrete or clay roof tiles



# SCOPE OF ACCREDITATION

TAS 102	Test procedure for static uplift resistance of mechanically attached, rigid roof systems
TAS 102(A)	Test procedure for static uplift resistance of mechanically attached, clipped, rigid, roof systems
UL 1296	Standard for shear resistance tests for ceiling boards for manufactured homes

*AAMA: American Architectural Manufacturers Association*

*AATCC: American Association of Textile Chemists and Colorists*

*ACI: American Concrete Institute*

*AGA: American Gas Association*

*AISI: American Iron and Steel Institute*

*API: American Petroleum Institute*

*ASSE: American Society of Safety Engineers*

*AWPA: American Wood Protection Association*

*CSGB: Canadian General Standards Board*

*FMVSS: Federal Motor Vehicle Safety Standards*

*NFPA: National Fire Protection Association*

*NSF: National Sanitation Foundation*

*SBCCI: Southern Building Code Congress International*

*TAS: Testing Application Standards*

*UBC: Uniform Building Code*

*UL: Underwriters Laboratories*

*ULC: Underwriters Laboratories*