

Laboratory Certificate



This certifies that Applied Research Laboratories of South Florida LLC located at 5371 NW 161 St., Miami, FL 33014 is an approved Testing Laboratory in accordance with Miami-Dade County Department of Regulatory and Economic Resources and Protocol TAS301-94, and is Certified to perform the following tests:

TAS101	TAS135 Section 7.4
TAS102	ASTM C1167
TAS114 Appendix E	ASTM E529
TAS123	IAS Accreditation Report No. TL-222
TAS123(A)	

Results of the above mentioned test shall be properly submitted to the Miami-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:

Luis Martinez, P.E., Marlin Dave Brinson, P.E.

*This Certification and Registration Approved: **October 7, 2021***
*This Certification and Registration Expires : **November 11, 2026***

*Certification No. : **21-0909.02** Renews: 16-0811.10*

A blue ink signature of Helmy A. Makar, written in a cursive style.

*Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
Product Control Section*

A blue ink signature of Americo Segura, written in a cursive style.

*Americo Segura, M.S.
Quality Assurance Unit Supervisor
Product Control Section*

The Miami-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.



CERTIFICATE OF ACCREDITATION

This is to attest that

APPLIED RESEARCH LABORATORIES OF SOUTH FLORIDA, LLC

5371 NORTHWEST 161ST STREET
MIAMI, FLORIDA 33014, U.S.A.

Testing Laboratory TL-222

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 February 18, 2021



A handwritten signature in black ink that reads "Raj Nathan".

President

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

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

APPLIED RESEARCH LABORATORIES OF SOUTH FLORIDA, LLC

arl-test.com

Contact Name Joanne Hoefling

Contact Phone +1-305-624-4800

Accredited to ISO/IEC 17025:2017

Effective Date February 18, 2021

Physical	
ANSI/ASC A14.1	American national standards for ladders – wood safety requirements
ANSI/ASTM D1621	Standard test method for compressive properties of rigid cellular plastics
ANSI/ASTM D1622	Standard test method for apparent density of rigid cellular plastics
ANSI/ASTM D2126	Standard test method for response of rigid cellular plastics to thermal and humid aging
ASTM B117	Standard practice for operating salt spray (fog) apparatus
ASTM C209	Standard test methods for cellulosic fiber insulating board
ASTM C303	Standard test method for dimensions and density of preformed block and board-type thermal insulation
ASTM C794	Standard test method for adhesion-in-peel of elastomeric joint sealants
ASTM D412	Test methods for vulcanized rubber and thermoplastic rubbers and thermoplastic elastomers tension
ASTM D413	Standard test methods for rubber property—adhesion to flexible substrate
ASTM D471	Standard test method for rubber property—effect of liquids
ASTM D573	Standard test method for rubber—deterioration in an air oven
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 D1598	Standard test method for time-to-failure of plastic pipe under constant internal pressure
ASTM D1653	Standard test methods for water vapor transmission of organic coating films
ASTM D1654	Standard test method for evaluation of painted or coated specimens subjected to corrosive environments
ASTM D2240	Standard test method for rubber property—durometer hardness

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ASTM D2370	Standard test method for tensile properties of organic coatings
ASTM D2523	Standard practice for testing load-strain properties of roofing membranes
ASTM D3359	Standard test methods for measuring adhesion by tape test
ASTM E96	Standard test methods for water vapor transmission of materials
ASTM E1512	Standard test methods for testing bond performance of bonded anchors
ASTM F876	Standard specification for crosslinked polyethylene (PEX) tubing
ASTM G29	Standard practice for determining algal resistance of plastic films
ASTM G85	Standard practice for modified salt spray (fog) testing
ANSI/ASTM D256	Standard test methods for determining the Izod pendulum impact resistance of plastics
ANSI/ASTM D570	Standard test method for water absorption of plastics
ANSI/ASTM D638	Standard test method for tensile properties of plastics
ANSI/ASTM D790	Standard test methods for flexural properties of unreinforced and reinforced plastics and electrical insulating materials
TAS 114-95 Appendix E	Testing Application Standard (TAS) test procedure for corrosion resistance of fasteners, batten bars and stress distribution plates (excluding section 3)
Heating/Cooling	
ANSI/AHAM RAC-1	Room air conditioners
ANSI/AHRI Standard 210/240	Unitary air-conditioning and air-source heat pump equipment
ANSI/AHRI Standard 340/360	Performance rating of commercial and industrial unitary air-conditioning and heat pump equipment (65,000 – 90,000 BTU/H only)
ANSI/ASHRAE Standard 37	Methods of testing for rating electrically driven unitary air-conditioning and heat pump equipment
ANSI/UL 174	Standard for household electric storage tank water heaters
ANSI/UL 207	Standard for refrigerant-containing components and accessories, nonelectrical
ANSI/UL 474	Standard for dehumidifiers
ANSI/UL 484	Standard for room air conditioners (excluding supplement SA - requirements for room air conditioners employing a flammable refrigerant in the refrigerating system)
ANSI/UL 499	Standard for electric heating appliances
ANSI/UL 834	Standard for heating, water supply, and power boilers - electric

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ANSI/UL 1995	Heating and cooling equipment (excluding section 35 condensing and compressor units employing flammable refrigerants and section 64 fatigue test)
ANSI/UL 1996	Standard for electric duct heaters
ANSI/UL 2021	Standard for fixed and location-dedicated electric room heaters
Mechanical	
ANSI/ASME A17.1	Safety code for elevators and escalators (section 8.33)
ANSI/ASME A112.19.17	Manufactured safety vacuum release systems (SVRS) for residential and commercial swimming pool, spa, hot tub, and wading pool suction systems
ANSI/UL 22	Standard for amusement and gaming machines
ANSI/UL 73	Standard for motor-operated appliances
ANSI/UL 325	Standard for door, drapery, gate, louver, and window operators and systems
ANSI/UL 710	Standard for exhaust hoods for commercial cooking equipment
ANSI/UL 749	Household dishwashers
ANSI/UL 756	Standard for coin and currency changers and actuators
UL 104	Standard for elevator door locking devices and contacts
Electrical	
ANSI/ASME A17.5	Elevator and escalator electrical equipment
ANSI/NFPA 79	Electrical standard for industrial machinery
ANSI/UL 50	Enclosures for electrical equipment, non-environmental considerations
ANSI/UL 50E	Enclosures for electrical equipment, environmental considerations (excluding 8.4, dust test, 8.5 external icing test, 8.7 indoor corrosion protection, 8.8 outdoor corrosion protection, 8.9 additional corrosion protection for type 3x, 3rx, 3sx, 4x and 6p, 8.10 submersion test, 8.12 oil exclusion test)
ANSI/UL 65	Standard for wired cabinets
ANSI/UL 96	Standard for lightning protection components
ANSI/UL 197	Standard for commercial electric cooking appliances
ANSI/UL 231	Standard for power outlets
ANSI/UL 506	Standard for specialty transformers
ANSI/UL 507	Standard for electric fans

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ANSI/UL 508	Industrial control equipment
ANSI/UL 676	Standard for underwater luminaires and submersible junction boxes
ANSI/UL 813	Standard for commercial audio equipment
ANSI/UL 1008	Transfer switch equipment
ANSI/UL 1029	Standard for high-intensity-discharge lamp ballasts
ANSI/UL 1238	Standard for control equipment for use with flammable liquid dispensing devices
ANSI/UL 1310	Standard for class 2 power units
ANSI/UL 1598	Luminaires (except clauses 17.3, 17.5.5, 17.6 through 17.9, and 17.25 through 17.29)
ANSI/UL 1838	Standard for low voltage landscape lighting systems
ANSI/UL 2108	Standard for low voltage lighting systems
ANSI/UL 5085-1	Low voltage transformers - part 1: general requirements
ANSI/UL 5085-3	Low voltage transformers - part 3: class 2 and class 3 transformers
CAN/CSA B72-M87	Installation code for lightning protection systems
IEC/UL/CSA 60335-1	Safety of Household and Similar Appliances, Part 1
IEC/UL/CSA 60335-2-40	Household and similar electrical appliances - Safety - Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers (excluding section EE.5, fatigue test)
IEC/EN/CSA/UL/ANSI/AAMI ES60601-1	Medical electrical equipment, part 1: general requirements for safety (excluding sections 5, 6 and 7 and sub clauses 43.2 and 48)
IEC/EN/CSA/UL 60950-1	Information Technology Equipment – Safety – Part 1
NEMA 250	Enclosures for Electrical Equipment (1000 Volts Maximum)
ENERGY STAR	
ENERGY STAR program requirements for central air conditioners and air source heat pumps, ver 5.0	10 CFR 430, Subpart B, Appendix M ANSI/AHRI 210/240
ENERGY STAR program requirements for geothermal heat pumps, ver 3.1	ISO 13256-1-1998 ISO 13256-2-1998 ANSI/AHRI 870-2005
ENERGY STAR Program requirements for light commercial HVAC, ver 3.1	10 CFR 431, Subpart F (431.96)

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ENERGY STAR program requirements for residential heat pump water heaters (electric only), ver 1.1	10 CFR 430, Subpart B, Appendix E
ENERGY STAR program requirements for water coolers, ver 2.0	Energy Star Test Method May-2013