Miami-Dade County, Florida

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES

BOARD AND CODE ADMINISTRATION DIVISON

Laboratory Certificate



PRODUCT CONTROL SECTION 11805 S.W. 26 Street-Room 208

Miami, Florida 33175-2474 T (786) 315-2590 Fax (786) 315-2599

This certifies that Intertek Testing Services, NA, Inc. located at 8431 Murphy Drive, Middleton, WI 53562 is an approved Testing Laboratory in accordance with Mami-Dade County Department of Regulatory and Economic Resources and Protocol TAS 301-94, and is Certified to perform the following tests:

TAS201 TAS202 TAS203 TAS111(A) TAS111(B) TAS111(C) TAS114 Appendix A TAS114 Appendix C TAS114 Appendix D TAS114 Appendix E (Salt spray only) TAS114 Appendix F TAS114 Appendix H International Accreditation Servic, Inc. Certificate of Accreditation TL-271 U.S. Department of Labor (OSHA) Federal Register 29 CFR 1910.7

Results of the above mentioned test shall be properly submitted to the Miami-Dade County Department of Regulatory and Economic Resources per TAS 301-94, along with all other documentation required for the approval of products. Approved engineer(s) for this laboratory:

Vinu Abraham, P.E.; Tyler Westerling, P.E.; Michael Weigner, P.E.; Tanya A. Dolby, P.E.

This Certification and Registration Approved:June 30, 2022This Certification and Registration Expires :July 3, 2026

Certification No. : 22-0428.05 Revises: 20-0831.05

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

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

The Mami-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

INTERTEK TESTING SERVICES NA, INC.

8431 MURPHY DRIVE MIDDLETON, WISCONSIN 53562, U.S.A.

Testing Laboratory TL-271

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 September 29, 2021



President

Visit www.iasonline.org for current accreditation information.

International Accreditation Service, Inc.

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INTERTEK TESTING SERVICES NA, INC.

www.intertek.com

Contact Name Brian Brunson

Contact Phone +1-608-824-7444

Accredited to ISO/IEC 17025:2017

Effective Date September 29, 2021

| Conformity Specifications | 6 |
|----------------------------------|---|
| ASTM E329 | Standard specification for agencies engaged in construction inspection, testing, or special inspection (sections 8-12) |
| ASTM E699 | Standard specification for agencies involved in testing, quality assurance and evaluating of manufactured building components (part A) |
| Chemical | |
| ASTM C871 | Standard test methods for chemical analysis of thermal insulation materials for leachable chloride, fluoride, silicate, and sodium ions |
| ASTM D1475 | Standard test method for density of liquid coatings, inks, and related products |
| ASTM D2369 | Standard test method for volatile content of coatings |
| ASTM D4017 | Standard test method for water in paints and paint materials by Karl Fischer method |
| ASTM D5403 | Standard test methods for volatile content of radiation curable materials (limited to UV exposure) |
| ASTM E1252 | Standard practice for general techniques for obtaining infrared spectra for qualitative analysis (sections 6.2, 6.3, 6.5.3, 7.7, 9.1, 9.2 and 9.3 only) |
| ASTM F925 | Standard test method for resistance to chemicals of resilient flooring |
| ASTM G87 | Standard practice for conducting moist SO ₂ tests |
| EPA Method 24 | Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings |
| ISO/EN 6988 | Metallic and other non-organic coatings sulfur dioxide test with general condensation of moisture |
| Environmental | |
| ANSI/BHMA A156.18 | Materials and finishes |
| ASTM B117 | Standard practice for operating salt spray (fog) apparatus |
| ASTM C692 | Standard test method for evaluating the influence of thermal insulations on external stress corrosion cracking tendency of austenitic stainless steel |
| ASTM E871 | Standard test method for moisture analysis of particulate wood fuels |
| ASTM G1 | Standard practice for preparing, cleaning, and evaluating corrosion test specimens |
| ASTM G147 | Standard practice for conditioning and handling of nonmetallic materials for natural and artificial weathering tests |
| ASTM G151 | Standard practice for exposing nonmetallic materials in accelerated test devices that use laboratory light sources (except section 5.1) |
| ASTM G154 | Standard practice for operating fluorescent ultraviolet (UV) lamp apparatus for exposure of nonmetallic materials |
| DIN 50018 | Testing in a saturated atmosphere in the presence of sulfur dioxide |
| Fire | |
| ABD 0031 | Fire test to aircraft material |
| ASTM D635 | Standard test method for rate of burning and/or extent and time of burning of plastics in a horizontal position |





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| ASTM D1929 | Standard test method for determining ignition temperature of plastics |
|------------------|--|
| | Standard test method for density of smoke from the burning or |
| ASTM D2843 | decomposition of plastics |
| ASTM D2863 | Standard test method for measuring the minimum oxygen concentration to |
| | support candle-like combustion of plastics (oxygen index) |
| ASTM E108 | Standard test methods for fire tests of roof coverings |
| ASTM E119 | Standard test methods for fire tests of building construction and materials |
| | Standard test method for behavior of materials in a vertical tube furnace at |
| ASTM E136 | 750°C |
| | Standard test method for surface flammability of materials using a radiant |
| ASTM E162 | heat energy source |
| | Standard test method for specific optical density of smoke generated by |
| ASTM E662 | solid materials |
| | Standard test method for kinetic parameters for thermally unstable materials |
| ASTM E698 | using differential scanning calorimetry and the Flynn/Wall/Ozawa method |
| ASTM E800 | Standard guide for measurement of gases present or generated during fires |
| ASTM E814 | Standard test method for fire tests of penetration firestop systems |
| | Standard test method for heat and visible smoke release rates for materials |
| ASTM E1354 | and products using an oxygen consumption calorimeter |
| BS 476-20 | Fire resistance test to building material |
| | Fire tests on building materials and structures - method for determination of |
| BS 476-22 | the fire resistance of non-loadbearing elements of construction |
| | Furniture - assessment of the ignitability of mattresses and upholstered bed |
| BS EN 597-1 | bases - ignition source smouldering cigarette |
| | Furniture - assessment of the ignitability of mattresses and upholstered bed |
| BS EN 597-2 | bases - ignition source: match flame equivalent |
| | Furniture - assessment of the ignitability of upholstered furniture - ignition |
| BS EN 1021-1 | source smouldering cigarette |
| | Furniture - assessment of the ignitability of upholstered furniture - ignition |
| BS EN 1021-2 | source match flame equivalent |
| | Fire resistance and smoke control tests for door and shutter assemblies, |
| BS EN 1634-1 | openable windows and elements of building hardware - fire resistance test |
| | for door and shutter assemblies and openable windows |
| | Methods of test for assessment of ignitability of mattresses, upholstered |
| BS EN 6807 | divans and upholstered bed bases with flaming types of primary and |
| | secondary sources of ignition |
| BS EN ISO 4589-2 | Plastics - determination of burning behaviour by oxygen index - guidance |
| DO EN 100 4500 0 | Plastics - determination of burning behaviour by oxygen index - elevated |
| BS EN ISO 4589-3 | temperature test |
| BSS 7230 | Flammability testing of aircraft materials |
| BSS 7238 | Fire test to aircraft material – toxicity |
| BSS 7239 | Toxic gas generation |
| CA TB 117 | Requirements, test procedure and apparatus for testing the flame |
| | retardance of resilient filling materials used in upholstered furniture |
| CA Title 19 | Flame retardant regulations |
| FMVSS 302 | Flammability of interior materials |
| ISO 1182 | Reaction to fire tests for products non-combustibility test |
| ISO 5659 | Plastics smoke generation part 2: Determination of optical density by a |
| | single-chamber test |





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| ISO 5660 | Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Part 1: Heat release rate (cone calorimeter method) and smoke production rate (dynamic measurement) |
|-------------------|--|
| ISO 19702 | Guidance for sampling and analysis of toxic gases and vapors in fire effluents using Fourier transform infrared (FTIR) spectroscopy |
| MIL-PRF-85045G | Performance specification: cables, fiber optic, general specification (sections 4.8.3 and 4.8.6) |
| MIL-STD-24640C | Detail specification: cables, light-weight, electric, for shipboard use, general specification (sections 4.7.17 and 4.7.19 only) |
| MIL-STD-24643C | DETAIL specification: cables, electric, low smoke halogen-free, for shipboard use general specification (sections 4.8.25 and 4.8.27 only) |
| NES 711 | Determination of the smoke index of the products of combustion from small specimens of materials |
| NES 713 | Determination of the toxicity index of the products of combustion from small specimens of materials |
| NFPA 251 | Standard methods of tests of fire resistance of building construction and materials |
| NFPA 252 | Standard methods of fire tests of door assemblies |
| NFPA 253 | Standard method of test for critical radiant flux of floor covering systems using a radiant heat energy source |
| NFPA 256 | Standard methods of fire tests of roof coverings |
| NFPA 257 | Standard on fire test for window and glass block assemblies |
| NFPA 259 | Standard test method for potential heat of building materials |
| | Standard method of test for determining resistance of mock-up upholstered |
| NFPA 261 | furniture material assemblies to ignition by smoldering cigarettes |
| NFPA 701 | Standard methods of fire tests for flame propagation of textiles and films |
| UL 9 | Standard for fire tests of window assemblies |
| UL 10A | Standard for tin-clad fire doors |
| UL 10B | Standard for fire tests of door assemblies |
| UL 10C | Standard for positive pressure fire tests of door assemblies |
| UL 10D | Standard for fire tests of fire protective curtain assemblies |
| | Standard for tests for flammability of plastic materials for parts in devices |
| UL 94 | and appliances |
| UL 790 | Standard for standard test methods for fire tests of roof coverings |
| UL 1703 | Standard for flat-plate photovoltaic modules and panels, (sections 31.1 and 31.2 only) |
| ULC S109 | Flame tests of flame-resistant fabrics and films |
| | Standard method of test for determination of degrees of combustibility of |
| ULC S135 | building materials using an oxygen consumption calorimeter (cone calorimeter) |
| Heating / Cooling | |
| ANSI Z21.1 | Household cooking gas appliances |
| ANSI Z21.11.2 | Gas-fired room heaters - volume II, unvented room heaters |
| ANSI Z21.50 | Vented decorative gas appliances |
| ANSI Z21.58 | Outdoor cooking gas appliances |
| ANSI Z21.60 | Decorative gas appliances for installation in solid-fuel burning fireplaces |
| ANSI Z21.88 | Vented gas fireplace heaters |
| ANSI Z83.11 | Gas food service equipment |
| ANSI/UL 103 | Standard for factory-built chimneys for residential type and building heating appliances |
| ANSI/UL 127 | Standard for factory-built fireplaces |





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| ANSI/UL 737 | Standard for fireplace stoves |
| ANSI/UL 1482 | Standard for solid-fuel type room heaters |
| AS 1530.1 | Methods for fire tests on building materials, components and structures |
| | Combustibility test for materials |
| ASTM E1509 | Standard specification for room heaters, pellet fuel-burning type |
| ASTM E2515 | Determination of Particulate Matter Collected by a Dilution Tunnel |
| ASTM E2618 | Measurement of Particulate Emissions and Heating Efficiency of Solid-Fuel Fired Hydronic Heating Appliances |
| ASTM E2779 | Standard test Method for Determining particulate matter emissions from Pellet Heaters |
| ASTM E2780 | Standard Test Method for Determining particulate matter emissions from Wood Heaters |
| ASTM E3053 | Standard Test Method for Determining Particulate Matter Emissions from Wood |
| CAN/CSA B415.1 | Performance Testing of Solid Fuel Burning Heating Appliances |
| EPA 40 CFR Part 60, Subpart | |
| AAA, Method 28R | Certification and Auditing of Wood Heaters |
| UL 391 | Standard for solid-fuel and combination-fuel central and supplementary furnaces |
| UL 907 | Standard for fireplace accessories |
| Misc / Energy Star® | |
| ANSI/BHMA 156.1 | Butts and hinges |
| ANSI/BHMA 156.2 | Bored & preassembled locks and latches |
| ANSI/BHMA 156.3 | Exit devices |
| ANSI/BHMA 156.4 | Door controls-closers |
| ANSI/BHMA 156.5 | Cylinders and input devices for locks |
| ANSI/BHMA 156.6 | Architectural door trim |
| ANSI/BHMA 156.9 | Cabinet hardware |
| ANSI/BHMA 156.10 | |
| | Power operated pedestrian doors Cabinet locks |
| ANSI/BHMA 156.11 | |
| ANSI/BHMA 156.12 | Interconnected locks & latches |
| ANSI/BHMA 156.13 | Mortise locks |
| ANSI/BHMA 156.15 | Release devices |
| ANSI/BHMA 156.16 | Auxiliary hardware |
| ANSI/BHMA 156.17 | Self-closing hinges |
| ANSI/BHMA 156.20 | Strap and tee hinges and hasps |
| ANSI/BHMA 156.21 | Thresholds |
| ANSI/BHMA 156.23 | Electromagnetic locks |
| ANSI/BHMA 156.24 | Delayed egress locks |
| ANSI/BHMA A156.36 | Auxiliary locks |
| ANSI/BHMA A156.39 | Residential locksets and latches |
| ANSI/BHMA A156.40 | Residential deadbolts |
| 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 |
| Roof Products Version 3.0 | Energy Star® program requirements for roof products |
| UL 437 | Standard for Safety of Key Locks |
| Physical | |
| AAMA 501.1 | Standard test method for water penetration of windows, curtain walls and doors using dynamic pressure |
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| AAMA/WDMA/CSA | |
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| 101/IS2/A440 | Standard/specification for windows, doors, and skylights |
| AATCC 127 | Water resistance: hydrostatic pressure test |
| ANSI A250.4 | Test procedure and acceptance criteria for – physical endurance for steel doors, frames and frame anchors |
| ANSI Z97.1 | Standard for safety glazing materials used in buildings – safety performance specifications and methods of test (CI. 5.1 Only) |
| ASTM C271 / C271M | Standard test method for density of sandwich core materials |
| ASTM C297 / C297M | Standard test method for flatwise tensile strength of sandwich constructions |
| ASTM C1629/C1629M | Standard classification for abuse-resistant nondecorated interior gypsum panel products and fiber-reinforced cement panels |
| ASTM D143 | Standard test methods for small clear specimens of timber (Cl. 14 Only) |
| ASTM D638 | Standard test method for tensile properties of plastics |
| ASTM D737 | Standard test method for air permeability of textile fabrics |
| 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 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 D905 | Standard test method for strength properties of adhesive bonds in shear by compression loading |
| ASTM D906 | Standard test method for strength properties of adhesives in plywood type construction in shear by tension loading |
| ASTM D1037 | Standard test methods for evaluating properties of wood-base fiber and particle panel materials (excluding sections 7, 17, 18, 22 and 28) |
| ASTM D1623 | Standard test method for tensile and tensile adhesion properties of rigid cellular plastics |
| ASTM D1875 | Standard test method for density of adhesives in fluid form |
| ASTM D2244 | Standard practice for calculation of color tolerances and color differences from instrumentally measured color coordinates |
| ASTM D2247 | Standard practice for testing water resistance of coatings in 100 % relative humidity |
| ASTM D2842 | Standard test method for water absorption of rigid cellular plastics |
| ASTM D3746 / D3746M | Standard test method for impact resistance of bituminous roofing systems |
| ASTM D4060 | Standard test method for abrasion resistance of organic coatings by the taber abraser |
| ASTM D5402 | Standard practice for assessing the solvent resistance of organic coatings using solvent rubs |
| ASTM D5751 | Standard Specification for Adhesives Used for Laminate Joints in Nonstructural Lumber Products |
| ASTM D5795 | Standard Test Method for Determination of Liquid Water Absorption of Coated Wood and Wood Based Products Via "Cobb Ring" Apparatus |
| ASTM D6226 | Standard test method for open cell content of rigid cellular plastics |
| ASTM D7073 | Standard guide for application and evaluation of brush and roller applied paint films |
| ASTM E8 / E8M | Standard test methods for tension testing of metallic materials |
| ASTM E18 | Standard test methods for Rockwell hardness of metallic materials |
| ASTM E72 Cl. 14 Only | Standard test methods of conducting strength tests of panels for building construction |
| ASTM E96 / E96M | Standard test methods for water vapor transmission of materials |
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| ASTM E283 | Standard test method for determining rate of air leakage through exterior windows, curtain walls, and doors under specified pressure differences |
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| ASTM E331 | across the specimen Standard test method for water penetration of exterior windows, skylights, doors, and curtain walls by uniform static air pressure difference |
| ASTM E547 | Standard test method for water penetration of exterior windows, skylights, doors, and curtain walls by cyclic static air pressure difference |
| ASTM E605 / E605M | Standard test methods for thickness and density of sprayed fire-resistive material (SFRM) applied to structural members |
| ASTM E736 / E736M | Standard test method for cohesion/adhesion of sprayed fire-resistive materials applied to structural members |
| ASTM E759 / E759M | Standard test method for effect of deflection on sprayed fire-resistive material applied to structural members |
| ASTM E760 / E760M | Standard test method for effect of impact on bonding of sprayed fire- resistive material applied to structural members |
| ASTM E761 / E761M | Standard test method for compressive strength of sprayed fire-resistive material applied to structural members |
| ASTM E2068 | Standard test method for determination of operating force of sliding windows and doors |
| 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 E2357 | Standard test method for determining air leakage of air barrier assemblies |
| 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 |
| ASTM F1577 | Standard test methods for detention locks for swinging doors |
| 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 |
| CPSC 16 CFR 1201 | Commercial practices – consumer product safety commission – consumer product safety act regulations – safety standard for architectural glazing materials |
| ICC ES AC212 | Water-resistive coatings used as water-resistive barriers over exterior sheathing (test methods referenced in sections 3.0 and 4.0 only) |
| ICC ES EG356 | Evaluation guidelines for a moisture drainage system used with exterior wall veneers (except section 3.1.6) |
| NFRC 400 | Procedure for determining fenestration product air leakage |
| 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 |
| UL 1777 | Standard for chimney liners |
| UL 1784 | Standard for air leakage tests of door assemblies and other opening protectives |
| WDMA I.S. 1-A | Industry standard for interior architectural wood flush doors |
| WDMA I.S. 2 (AAMA/WDMA/CSA 101/I.S.2/A440) | North American fenestration standard for windows, doors, and skylights |



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| WDMA I.S. 3 | Wood sliding patio doors |
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| WDMA I.S. 6A | Industry standard for architectural stile and rail doors |
| WDMA I.S. 7 (AAMA/WDMA 1600/I.S. 7) | Voluntary specification for skylights |
| WDMA T.M. 10 | Screw holding capacity |
| WDMA T.M. 5 | Test method to determine the split resistance of stile edges of wood doors |
| WDMA T.M. 6 | Adhesive durability |
| WDMA T.M. 7 | Cycle slam test |
| WDMA T.M. 8 | Hinge loading test |
| Structural | |
| ANSI/DASMA 108 | Standard method for testing sectional garage doors and rolling doors: determination of structural performance under uniform static air pressure difference |
| ANSI/DASMA 115 | Standard method for testing sectional garage doors and rolling doors: determination of structural performance under missile impact and cyclic wind pressure |
| ASTM D905 | Standard test method for strength properties of adhesive bonds in shear by compression loading |
| ASTM D1761 | Standard test methods for mechanical fasteners in wood |
| ASTM D5764 | Standard test method for evaluating dowel-bearing strength of wood and wood-based products |
| ASTM E330 | Standard test method for structural performance of exterior windows, doors, skylights and curtain walls by uniform static air pressure difference |
| ASTM E1233 / E1233M | Standard test method for structural performance of exterior windows, doors, skylights, and curtain walls by cyclic air pressure differential |
| 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 F1575 | Standard test method for determining bending yield moment of nails |
| ICC ES AC01 | Expansion anchors in masonry elements (test methods referenced in section 5.0 only) |
| ICC ES AC05 | Sandwich panel adhesives (test methods referenced in sections 5.0, 6.0, 7.0, 8.0 and 9.0 only) |
| TAS 201 | Impact test procedures |
| UL 2218 | Standard for impact resistance of prepared roof covering materials |
| Thermal | |
| ASTM C209 | Standard test methods for cellulosic fiber insulating board |
| ASTM C518 | Standard test method for steady-state thermal transmission properties by means of the heat flow meter apparatus |
| ASTM C1512 | Standard test method for characterizing the effect of exposure to environmental cycling on thermal performance of insulation products |
| ASTM E537 | Standard test method for the thermal stability of chemicals by differential scanning calorimetry |
| ICC ES AC12 | Foam plastic insulation (test methods referenced in sections 3.0 and 4.0 only) |

AAMA: American Architectural Manufacturers Association

AATCC: American Association of Textile Chemists and Colorists



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ABD: Airbus Directive AS: Australian Standard BHMA: Builders Hardware Manufacturers Association BSS: British Standards Society CA TB: California Technical Bulletin CPSC: Consumer Product Safety Commission DASMA: Doors & Access Systems Manufacturers Association DIN: German Standard FMVSS: Federal Motor Vehicle Safety Standards MIL-PFR: Military Performance MIL-STD: Military Standard NES: Naval Engineering Standard NFPA: National Fire Protection Association NFRC: National Fenestration Rating Council NZ: New Zealand Standard TAS: Testing Application Standards (Miami-Dade County Protocol) TO: Compendium Method U.S. Environmental Protection Agency UBC: Uniform Building Code UL: Underwriters Laboratories ULC: Underwriters Laboratories Canada WDMA: Window and Door Manufacturer

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