

TESTING AND CALIBRATION LABORATORY ACCREDITATION PROGRAM (LAP)

Scope of Accreditation

Legal Name of Accredited Laboratory: **FM APPROVALS LLC.**

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To ensure compliance with the *Official Languages Act*, the Standards Council of Canada (SCC) translated proprietary content from English to French when it was not available in French. In case of discrepancies between the English and French versions, in case of discrepancies between the English and French versions, the original version of the method prevails.

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| SCC File Number: | 15630 |
| Accreditation Standard(s): | ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories |
| Fields of Testing: | Chemical/Physical Electrical/Electronic Mechanical/Physical Thermal & Fire Resistance |
| Initial Accreditation: | 2004-12-01 |
| Most Recent Accreditation: | 2024-03-27 |
| Accreditation Valid to: | 2028-12-01 |

CONSTRUCTION

Construction Materials (excluding textile products):

Fire Resistant

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| FM 4911 | Wafer Carriers for Use in Clean Rooms |
| FM 4411 | Cavity Walls and Rainscreens |
| FM 4450 | Class I 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 Non-combustible Roof Deck Construction |
| FM 4471 | Class 1 Panel Roofs |
| FM 4880 | Approval Standard for Class 1 Fire Rating of Building Panels or Interior Finish Materials |
| FM 4881 | Class 1 Exterior Wall Systems |
| FM 4882 | Class 1 Interior Wall and Ceiling Material or Systems for Smoke Sensitive Occupancies |
| FM 4910 | Clean Room Materials Flammability Test Protocol |
| FM 4922 | Fume Exhaust Ducts or Fume and Smoke Exhaust Ducts |
| FM 4950 | Welding Pads, Welding Blankets and Welding Curtains for Hot Work Operations |

Flammability

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| FM 4996 | Classification of Pallets and Other Materials Handling Products as Equivalent to Wood Pallets |
| FM 6930 | Flammability Classification of Industrial Fluids |

Miscellaneous Construction Materials

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| FM 4020 | Steel Tanks for Fire Protection |
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Roof Coverings

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| FM 4435 | Edge Systems Used with Low Slope Roofing Systems |
| FM 4473 | Specification Test Standard for Impact Resistance Testing of Rigid Roofing Materials by Impacting with Freezer Ice Balls |

ELECTRICAL PRODUCTS AND ELECTRONIC PRODUCTS

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| CAN/CSA C22.2 No. 139 | Electrically Operated Valves |
| CAN/CSA C22.2 No. 14 *** | Industrial Control Equipment - Limit: 600V Max. Except for: 6.7 - Current Withstanding - Burnout - Short Circuit Calibration of Test Circuits - Short Circuit - Overload Relays - Controllers - Group Fusing - Instantaneous trip circuit breakers |

Equipment, Miscellaneous:

Hazardous Location Equipment

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| CAN.CSA C 22.2 No.60079-9 | Electrical Apparatus for Explosive Gas Atmospheres - Increased Safety "e" |
| CAN/CSA C22.2 No. 139 | Electrically Operated Valves |
| CAN/CSA C22.2 No. 14 | Industrial Control Equipment - Limit: 600V Max. Except for: 6.7 - Current Withstanding - Burnout - Short Circuit Calibration of Test Circuits - Short Circuit - Overload Relays - Controllers - Group Fusing - Instantaneous trip circuit breakers |
| CAN/CSA C22.2 No. 130.03 | Requirements for Electrical Resistance Heating Cables and Heating Device Sets Except for: Cl. A.2 - Weather Resistance Cl. B.1 - Toxicity Test Cl. B.2.2 - Ammonia Hydroxide |
| CAN/CSA C22.2 No. 137 ** | Electric Lighting Fixtures for Use in Hazardous Locations |
| CAN/CSA C22.2 No. 145 ** | Motors and Generators for Use in Hazardous Locations Class I Groups C and D, Class II Groups E, F and G |

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| CAN/CSA C22.2 No. 157 ** | Intrinsically Safe and Non-incendive Equipment for Use in Hazardous Locations |
| CAN/CSA C22.2 No. 159 ** | Attachment Plugs, Receptables and Similar Wiring Devices for Use in Hazardous Locations Class I, Groups A, B, C and D, Class II, Group G and Coal Dust and in Gaseous Mines |
| CAN/CSA C22.2 No. 174 ** | Cables and Cable Glands for Use in Hazardous Locations |
| CAN/CSA C22.2 No. 213 ** | Non-Incendive Electrical Equipment for use in Class 1, Division 2 Hazardous Locations |
| CAN/CSA C22.2 No. 25 ** | Enclosures for Use in Class II Groups E, F, G Hazardous Locations |
| CAN/CSA C22.2 No. 30 ** | Explosion-Proof Enclosures for Use in Class I Hazardous Locations Except for: C1. 6.10 - Gas-Tight Joints |
| CAN/CSA C22.2 No. 60079-0 ** | Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements |
| CAN/CSA C22.2 No. 60079-1 ** | Electrical Apparatus for Explosive Gas Atmospheres - Construction and Verification Test of Flameproof Enclosures for Electrical Apparatus |
| CAN/CSA C22.2 No. 60079-11 ** | Electrical Apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety "i" |
| CAN/CSA C22.2 No. 60079-15 ** | Electrical Apparatus for Explosive Gas Atmospheres - Part 15: Electrical Apparatus with Type of Protection "n" |
| CAN/CSA C22.2 No. 60079-18 ** | Electrical Apparatus for Explosive Gas Atmospheres – Encapsulation "m" Except for: Cl. 23.4.7.5 - Resistance to Light |
| CAN/CSA C22.2 No. 60079-2 ** | Electrical Apparatus for Explosive Gas Atmospheres - Electrical Apparatus: Type of Protection "p" |
| CAN/CSA C22.2 No. 60079-31 ** | Electrical Apparatus for Use in the Presence of Combustible Dust - Part 31: Equipment Dust Ignition Protection by Enclosure "t" |
| CAN/CSA C22.2 No. 60079-6 ** | Electrical Apparatus for Explosive Gas Atmospheres - Oil- Immersed Apparatus "o" |
| CAN/CSA C22.2 No. 60079-7 ** | Electrical Apparatus for Explosive Gas Atmospheres - Increased Safety "e" |
| CAN/CSA C22.2 No. 60079-5 ** | Electrical Apparatus for Explosive Gas Atmospheres - Powder Filling "q" |
| EN IEC 62443-3-3 * | Industrial communication networks – Network and system security - Part 3-3: System security requirements and security levels |
| EN IEC 62443-4-1 * | Security for industrial automation and control systems – Part 4-1: Secure product development lifecycle requirements |

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| EN IEC 62443-4-2 * | Security for industrial automation and control systems – Part4-2: Technical security requirements for IACS components |
| EN ISO 80079-36 ** | Explosive Atmospheres – Part 36: Non-electrical equipment for explosive atmospheres – Basic method and requirements |
| EN ISO 80079-37 ** | Explosive Atmospheres – Part 37: Non-electrical equipment for explosive atmospheres – Non-electrical type of protection constructional safety “c”, control of ignition sources “b”, liquid immersion “k” |
| IEC 60079-25 ** | Explosive Atmospheres – Part 25: Intrinsically Safe Electrical Systems |
| IEC 60079-26 ** | Explosive Atmospheres – Part 26: Equipment with Separation Elements or combined Levels of Protection (EPL Ga) |
| IEC 60079-28 ** | Explosive Atmospheres – Part 28: Protection of Equipment and Transmission Systems Using Optical Radiation |
| IEC 60079-30-1 ** | Explosive Atmospheres – Part 30-1: Electrical Resistance Trace Heating – General and Testing Requirements |
| NFPA 496 ** | Standard for Purge and Pressurized Enclosure for Electrical Equipment |

Other

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| FM Approvals Standard 7260 | Electrostatic Finishing Equipment/ Electrostatic Neutralizing Equipment |
| FM 7151, 7156, 7157 *** | Liquefied Petroleum Gas Vaporizers, Gas-Air Mixers and Vaporizer Mixers |

Scientific Instruments (for biological, chemical electrical, mechanical optical and physical examination):

Laboratory Equipment

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| CAN/CSA C22.2 No. 60529 ** | Degree of Protection Provided by Enclosure (IP Mode) |
| CAN/CSA C22.2 No. 61010.1 ** | Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use, Part 1: General Requirements Except for: Cl. 12.2.1 - Ionizing Radiation Test Cl. 12.4 - Microwave Radiation Cl. 12.5 - Sonic Detection and Ultrasonic Pressure test Cl. 12.6 - Laser Radiation Test Cl. 13.3 - Implosion Test of High Vacuum Devices as per IEC 65 |

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| CAN/CSA-C22.2 NO. 61010-2-030-12 (R2016) ** | Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-030: Particular requirements for testing and measuring circuits Except for: Ionizing Radiation Test, UV Radiation, Microwave Radiation, Sonic Detection and Ultrasonic Pressure test, Laser Radiation Test, Implosion Test of High Vacuum Devices as per IEC 65 |
| CAN/CSA-IEC 61010-2-201:14 ** | Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-201: Particular requirements for control equipment Except for: Ionizing Radiation Test, UV Radiation, Microwave Radiation, Sonic Detection and Ultrasonic Pressure test, Laser Radiation Test, Implosion Test of High Vacuum Devices as per IEC 65 |
| IEC 60529 ** | Degrees of Protection Provided by Enclosure (IP Mode) |

ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY

Occupational Health and Safety:

Fire Protection

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| CAN/CSA-B137.3 | Rigid PVC Pipe for Pressure Applications |
| FM 2008 | ESFR Automatic Sprinklers |
| ANSI Z21.21-2005/CSA 6.5 | Automatic Valves for Gas Appliances |
| CAN/CSA-B137.0 | Definitions, General Requirements, and Methods of Testing Thermoplastic Pressure Piping, Plumbing Products, and Materials |
| CSA CAN/CSA-C22.2 No. 60079-29- 1 ** | Explosive atmospheres - Part 29-1: Gas detectors - Performance requirements of detectors for flammable gases - Second Edition |
| CSA CAN/CSA-C22.2 No. 60079-29- 4 ** | Explosive atmospheres - Part 29-4: Gas detectors - Performance requirements of open path detectors for flammable gases - First Edition |
| CAN/ULC S520 | Standard for Fire Hydrants |
| CAN/ULC-S504 (UL 299) ** | Dry Chemical Fire Extinguishers |
| CAN/ULC-S508 (UL 711) ** | Rating and Fire Testing of Fire Extinguishers |
| CAN/ULC-S514 *** | Dry Chemical for Use in Hand and Wheeled Fire Extinguishers |
| CAN/ULC-S522 | Standard for Fire Extinguishers and Booster Hoses |
| CAN/ULC-S529 ** | Standard for Smoke Detectors for Fire Alarm Systems |

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| EN 45544-Part 1 ** | Workplace Atmospheres - Electrical Apparatus Used For The Direct Detection and Direct Concentration Measurement of Toxic Gases and Vapours - Part 1 General Requirements |
| EN 45544-Part 2 ** | Workplace Atmospheres - Electrical Apparatus Used For The Direct Detection and Direct Concentration Measurement of Toxic Gases and Vapours - Part 2 Performance Requirements For Apparatus Used For Measuring Concentrations in the Region of Limit Values. |
| EN 45544-Part 3 ** | Workplace Atmospheres - Electrical Apparatus Used For The Direct Detection and Direct Concentration Measurement of Toxic Gases and Vapours - Part 2 Performance Requirements For Apparatus Used For Measuring Concentrations Well Above Limit Values. |
| EN50104 ** | Electrical apparatus for the detection and measurement of oxygen – Performance requirements and test methods |
| EN50271 *** | Electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen. Requirements and tests for apparatus using software and/or digital technologies |
| EN 60079-29-1; IEC 60079-29-1 ** | Explosive Atmospheres – Part 29-1: Gas Detectors – Performance Requirements of Detectors for Flammable Gases |
| EN 60079-29-4, IEC 60079-29-4 ** | Explosive Atmospheres – Part 29-4: Gas Detectors – Performance requirements of Open Path Detectors for Flammable Gases |
| FM 2000 | Automatic Control Mode Sprinklers for Fire Protection |
| FM 5420 *** | Carbon Dioxide Extinguishing Systems |
| FM 5560 (May 2005) * | Water Mist Systems |
| NFPA 10 | Portable Fire Extinguishers |
| NFPA 11 | Foam Extinguishing Systems |
| NFPA 12 *** | Carbon Dioxide Extinguishing Systems |
| UL 1285 | Pipe and Couplings; (PVC for Underground Fire Service) |
| UL 1486 | Quick Opening Devices for Dry Pipe Valves for Fire Protection Service |
| UL 162 | Foam Equipment and Liquid Concentrates |
| UL 203 | Pipe Hanger Equipment for Fire Protection Service |
| ULC/ORD-C193 | Guide for the Investigation of Alarm Valves for Fire-Protection Service |
| ULC/ORD-C213 | Rubber Gasketed Fittings for Fire Protection Service |

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| ULC/ORD-C260 | Guide for the Investigation of Dry Pipe, Deluge, and Pre- Action Valves for Fire Protection Service |
| ULC/ORD-C262 | Gate Valves for Fire Protection Service |
| ULC/ORD-C312 | Check Valves for Fire Protection Service |
| ULC/ORD-C448 *** | Guide for the Investigation of Pumps for Fire Protection Service |
| ULC/ORD-C536 | Flexible Metal Hose |
| ULC/ORD-C668 | Guide for the Investigation of Hose Valves for Fire Protection Service |
| ULC-S386 ** | Flame Detectors |
| ULC-S511 | Standard for Lined Fire Hose for Interior Standpipes and Municipal and Industrial Fire Protection Services |
| ULC-S525 | Standard for Audible Signal Devices for Fire Alarm Systems Except for: Cl. 7.3 - Output Sound Pressure |
| ULC-S526 | Standard for Visual Signal Devices for Fire Alarm Signaling |
| ULC-S527 | Standard for Control Panels for Fire Alarm Systems |
| ULC-S530 | Standard for Heat Actuated Fire Detectors for Fire Alarm Systems Except for: Cl. 7.10.2 - Determination of Stress Cracking Test |
| ULC-S541 | Standard for Speakers for Fire Alarm Systems Except for: Cl. 7.3 - Frequency response and Sound Pressure Level |
| ULC-S548 | Standard for Alarm Initiating and Supervisory Devices for Water Type Extinguishing Systems |

Safety

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| UL 558 *** | Standard for Safety – Industrial Trucks, Internal Combustion Engine-Powered |
| UL 583 ** | Standard for Safety – Electric-Battery-Powered Industrial Trucks |

Number of Scope Listings: 104

Notes:

Some tests from this Scope of Accreditation may be performed entirely or in part at the following address: FM APPROVALS LLC, 743 Reynolds Road, West Glocester, RI 02814, USA.

Exceptions are noted as follows:

* Testing conducted at Norwood Laboratory

** Testing conducted at both locations

*** Some or all testing conducted at external locations such as customer sites

The following is a Scope of Accreditation for which this testing laboratory has been accredited to ISO/IEC17025:2017. Note that the parent organization is also accredited as a certification body.

The parent organization's Scope of Accreditation for certification activities may be broader than the listing of standards and test methods that appear above. Refer to the parent organization's Scope of Accreditation granted by the SCC for certification activities found at:

<http://www.scc.ca/en/accreditation/product-process-and-service-certification/directory-of-accredited-clients>, where standards, such as product standards, are listed below, the laboratory is considered accredited only for the testing elements in those standards.

ISO/IEC 17025:2017: General Requirements for the Competence of Testing and Calibration Laboratories

- ANSI:** American National Standards Institute
- CAN/CSA:** CSA Group (formerly the Canadian Standards Association)
- CAN/ULC:** Underwriters' Laboratories of Canada
- EN:** European Standard
- FM:** FM Approvals test method
- IEC:** International Electrotechnical Commission
- ISA:** International Society of Automation
- NFPA:** National Fire Protection Association
- UL:** Underwriters' Laboratories



This document forms part of the Certificate of Accreditation issued by the Standards Council of Canada (SCC). The original version is available in the Directory of Accredited Laboratories on the SCC website at www.scc.ca.

Elias Rafoul
Vice-President, Accreditation Services
Publication on: 2024-03-28