



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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ELECTRICAL

Valid to: November 30, 2017

Certificate Number: 2765.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following product safety and telecommunications tests:

Test:

Test Method(s)¹:

Product Safety

AS/NZS 60065 (*clause 10 only*);
 EN 60335-1 / IEC 60335-1 / AS/NZS 60335.1
 (*excluding clauses 22.16, cord reel test, and 22.32, oxygen bomb test*),
 and the Associated Part 2 Series of the Standards for the following
 equipment types:
 Part 2.2 Vacuum cleaner and water-suction cleaning appliances
 (AS/NZS National Variations only);
 Part 2.3 Electric Irons (AS/NZS National Variations only);
 Part 2.4 Spin Extractors (AS/NZS National Variations only);
 Part 2.5 Dishwasher;
 Part 2.6 Ranges, Hobs, Ovens and Similar Appliances
 (AS/NZS National Variations only);
 Part 2.7 Washing Machine;
 Part 2.8 Shavers, Hair Clippers, and Similar Appliances;
 Part 2.9 Grills, Toasters and Similar Cooking Appliance
 (AS/NZS National Variations only);
 Part 2.10 Floor Treatment Machines and Wet Scrubbing Machines
 (AS/NZS National Variations only);
 Part 2.11 Tumble Dryers;
 Part 2.12 Warming Plates and Similar Appliances
 (AS/NZS National Variations only);
 Part 2.13 Deep Fat Fryers, Frying Pans, and Similar Appliances;
 Part 2.14 Kitchen Machines (AS/NZS National Variations only);
 Part 2.15 Appliances for Heating Liquids;
 Part 2.16 Food Waste Disposers (AS/NZS National Variations only);
 Part 2.17 Blankets, Pads, Clothing, and Similar Flexible Heating
 Appliances (AS/NZS National Variations only);
 Part 2.21 Storage Water Heaters;
 Part 2.23 Appliances for Skin and Hair Care;
 Part 2.24 Refrigerators and Ice Makers
 (AS/NZS National Variations only);

Test:

*Product Safety
(Cont.)*

Test Method(s)¹:

- Part 2.25 Microwave Ovens including Combination Microwave Ovens (AS/NZS National Variations only);
- Part 2.26 Clocks (AS/NZS National Variations only);
- Part 2.27 Appliances for Skin Exposure to Ultraviolet and Infrared Radiation (AS/NZS National Variations only);
- Part 2.28 Sewing Machines (AS/NZS National Variations only);
- Part 2.29 Battery Chargers;
- Part 2.30 Room Heaters;
- Part 2.31 Range Hoods and other Cooking Fume Extractors (AS/NZS National Variations only);
- Part 2.32 Massage Appliances (AS/NZS National Variations only);
- Part 2.34 Motor-compressors (AS/NZS National Variations only);
- Part 2.35 Instantaneous Water Heaters (AS/NZS National Variations only);
- Part 2.40 Electrical Heat Pumps, Air-conditioners, and Dehumidifiers (AS/NZS National Variations only);
- Part 2.41 Pumps (AS/NZS National Variations only);
- Part 2.43 Clothes Dryers and Towel Rails;
- Part 2.44 Ironers (AS/NZS National Variations only);
- Part 2.45 Portable Heating Tools and Similar Appliances;
- Part 2.51 Stationary Circulation Pumps for Heating and Service Water Installations (AS/NZS National Variations only);
- Part 2.52 Oral Hygiene Appliances (AS/NZS National Variations only);
- Part 2.53 Sauna Heating Appliances and Infrared Cabins (AS/NZS National Variations only);
- Part 2.54 Surface Cleaning Appliances (AS/NZS National Variations only);
- Part 2.55 Aquariums and Garden Ponds (AS/NZS National Variations only);
- Part 2.56 Projectors (AS/NZS National Variations only);
- Part 2.59 Insect Killers (AS/NZS National Variations only);
- Part 2.60 Whirlpool Baths and Whirlpool Spas (AS/NZS National Variations only);
- Part 2.61 Thermal-storage Room Heaters (AS/NZS National Variations only);
- Part 2.65 Air-Cleaning Appliances (AS/NZS National Variations only);
- Part 2.66 Water-bed Heaters (AS/NZS National Variations only);
- Part 2.67 Floor Treatment Machines for Commercial Use (AS/NZS National Variations only);
- Part 2.68 Spray Extraction Machines for Commercial Use (AS/NZS National Variations only);
- Part 2.69 Wet and Dry Vacuum Cleaners, including Power Brush, for Commercial Use (AS/NZS National Variations only);
- Part 2.70 Milking Machines (AS/NZS National Variations only);
- Part 2.71 Electrical Heating Appliances for Breeding and Rearing Animal (AS/NZS National Variations only);
- Part 2.72 Floor Treatment Machines with or without Traction Drive for Commercial Use (AS/NZS National Variations only);
- Part 2.73 Fixed Immersion Heaters (AS/NZS National Variations only);

Test:

*Product Safety
(Cont.)*

Test Method(s)¹:

Part 2.74 Portable Immersion Heaters (AS/NZS National Variations only);
Part 2.75 Commercial Dispensing Appliances and Vending Machines
(AS/NZS National Variations only);
Part 2.76 Electric Fence Energizers (AS/NZS National Variations only);
Part 2.77 Pedestrian Controlled Mains-Operated Lawnmowers
(AS/NZS National Variations only);
Part 2.78 Outdoor Barbecues (AS/NZS National Variations only);
Part 2.79 High Pressure Cleaners and Steam Cleaners
(AS/NZS National Variations only);
Part 2.80 Fans;
Part 2.81 Foot Warmers and Heating Mats
(AS/NZS National Variations only);
Part 2.82 Amusement Machines;
Part 2.83 Heated Gullies for Roof Drainage
(AS/NZS National Variations only);
Part 2.84 Toilets (AS/NZS National Variations only);
Part 2.85 Fabric Steamers (AS/NZS National Variations only);
Part 2.86 Electric Fishing Machines (AS/NZS National Variations only);
Part 2.87 Electric Animal-stunning Equipment
(AS/NZS National Variations only);
Part 2.89 Commercial Refrigerating Appliances
(AS/NZS National Variations only);
Part 2.90 Commercial Microwave Ovens
(AS/NZS National Variations only);
Part 2.91 Walk-Behind and Hand-Held Lawn Trimmers and Lawn Edge
Trimmers (AS/NZS National Variations only);
Part 2.92 Pedestrian-Controlled Mains-Operated Lawn Scarifiers and
Aerators (AS/NZS National Variations only);
Part 2.94 Scissors Type Glass Shears (AS/NZS National Variations only);
Part 2.95 Drivers for Vertically Moving Garage Doors for Residential Use
(AS/NZS National Variations only);
Part 2.96 Flexible Sheet Heating Elements for Room Heating
(AS/NZS National Variations only);
Part 2.97 Drives for Rolling Shutters, Awnings, Blinds, and Similar
Equipment (AS/NZS National Variations only);
Part 2.98 Humidifiers;
Part 2.100 Hand-Held Mains-Operated Garden Blowers, Vacuums, and
Blower Vacuums (AS/NZS National Variations only);
Part 2.101 Vaporizers (AS/NZS National Variations only);
Part 2.102 Gas, Oil and Solid-Fuel Burning Appliances Having Electrical
Connections;
Part 2.103 Drives for Gates, Doors, and Windows
(AS/NZS National Variations only);
Part 2.105 Multifunctional Shower Cabinets
(AS/NZS National Variations only);
Part 2.106 Heated Carpets and for Heating Units for Room Heating
Installed under Removable Floor Coverings
(AS/NZS National Variations only);

Test:

*Product Safety
(Cont.)*

Test Method(s)¹:

Part 2.107 Robotic Battery Powered Electrical Lawnmowers
(AS/NZS National Variations only);
Part 2.108 Electrolysers (AS/NZS National Variations only);
Part 2.109 UV Radiation Water Treatment
(AS/NZS National Variations only);
Part 2.110 Commercial Microwave Appliances with Insertion or
Contacting Appliances (AS/NZS National Variations only);
AS/NZS 60598.1 / IEC 60598-1 / EN 60598-1
and the Associated Part 2 Series of the Standards for the following
Luminaires type:
Part 2.1: Fixed General Purpose Luminaires;
Part 2.2: Recessed Luminaires;
Part 2.4: Portable General Purpose Luminaires;
Part 2.5: Flood Lights;
Part 2.10: Portable Luminaires for Children;
Part 2.20: Lighting Chains;
AS/NZS 61558.1 / IEC 61558-1 / EN 61558-1
and the Associated Part 2 Series of the Standards for the following
Transformer types:
Part 2.1: Separating Transformers and Power Supplies Incorporating
Separating Transformers for General Applications;
Part 2.4: Isolating Transformers and Power Supplies Incorporating
Isolating Transformers;
Part 2.6: Safety Isolating Transformers and Power Supplies Incorporating
Safety Isolating Transformers;
Part 2.16: Switch Mode Power supply units and Transformers for Switch
Mode Power supply units;
IEC/EN 61347-1 (*except 18.2, PCB Resistance to Fire*);
AS/NZS 61347.1 and the Associated Part 2 Series of the Standards for the
following Lamp Control-gear Types:
Part 2.3: A.C. Supplied Electronics Ballasts for Fluorescent Lamps
(*except Annex J, Emergency Lighting*);
Part 2.11: Misc. Electronic Circuits used with Luminaires;
Part 2.13: D.C. or A.C. Supplied Electronic Control-gear for LED Modules;
AS/NZS 60745.1;
AS/NZS 60745.2.1 (*excluding clause 17.2*);
AS/NZS 60745.2.2 (*excluding clause 17.2*);
AS/NZS 60745.2.3;
AS/NZS 60745.2.4;
AS/NZS 60745.2.6 (*excluding clause 17.2*);
AS/NZS 60745.2.8;
AS/NZS 60745.2.11;
AS/NZS 60745.2.17;
IEC 62262;
AS/NZS 60950.1 (*excluding clause 7*);
IEC/EN 60950-1, 1st and 2nd Editions (*excluding clause 7*);
IEC 61029-1;
IEC 61029-2-5;
IEC 61029-2-9;

Test:

Test Method(s)¹:

*Product Safety
(Cont.)*

AS/NZS 3112;
AS/NZS 3105;
AS/NZS 3122;
AS/NZS 3100;
AS/NZS 3197;
AS/NZS 3133;
AS/NZS 3136;
AS/NZS 1158.6;
AS/IEC/EN 60529

Fire Hazard Testing

IEC 60112, EN 60112, AS/NZS 60112:
Proof and Comparative Tracking Indices of Solid Insulating Materials;
IEC 60695.11.5, EN60695.11.5, AS/NZS 60695.11.5:
Needle Flame Test;
IEC 60695.10.2, EN 60695.10.2, AS/NZS 60695.10.2:
Ball Pressure Test;
IEC 60695.2.10, EN 60695.2.10, AS/NZS 60695.2.10:
Glow-wire Apparatus and Common Test Procedure;
IEC 60695.2.11, EN 60695.2.11, AS/NZS 60695.2.11:
Glow-wire Flammability Test Method for End-Products;
IEC 60695.2.12, EN 60695.2.12, AS/NZS 60695.2.12:
Glow-wire Flammability Test Method for Materials;
IEC 60695.2.13, EN 60695.2.13, AS/NZS 60695.2.13:
Glow-wire Ignitability Test Method for Materials

Energy Efficiency

AS/NZS 2007.1; AS/NZS 6400: Dishwasher;
AS/NZS 2040.1; AS/NZS 6400: Clothes Washing Machines;
AS/NZS 2442.1: Rotary Clothes Dryers;
AS/NZS 4665.1: External Power Supplies

Telecommunications

AS/ACIF S002;
AS/CA S002+A1, Analogue Interworking and Non-interference
Requirements for Customer Equipment for Connection to the Public
Switched Telephone Network;
AS/ACIF S003;
AS/CA S003.1+A1, Customer Access Equipment for Connection to a
Telecommunications Network;
AS/CA S003.2, Customer Access Equipment for Connection to a
Telecommunications Network;
AS/CA S003.3, Customer Access Equipment for Connection to a
Telecommunications Network;
AS/ACIF S004, Voice Frequency Performance Requirements for
Customer Equipment;
AS/ACIF S008 (*excluding underground conduit, surge suppression
devices, optical fibre and coaxial cable, pits*), Requirements for
Customer Cabling Products;

Test:

Test Method(s)¹:

*Telecommunications
(Cont.)*

AS/ACIF S016, Requirements for Customer Equipment Connected to Hierarchical Digital Interfaces;
AS/ACIF S031, Requirements for ISDN Basic Access Interface;
TBR 003/A1;
AS/ACIF S038, Requirements for ISDN Primary Rate Access Interface;
TBR 004/A1;
AS/ACIF S040;
AS/ACIF S041;
AS/ACIF S041.1, Requirements for DSL Customer Equipment for Connection to the Public Switched Telephone Network Part 1: General;
AS/ACIF S041.2, Requirements for DSL Customer Equipment for Connection to the Public Switched Telephone Network Part 2: Modems for use in Connection with all DSL Services;
AS/ACIF S041.3, Requirements for DSL Customer Equipment for Connection to the Public Switched Telephone Network Part 3: Filters for use in Connection with all ADSL Services;
AS/ACIF S043.1, Requirements for Customer Equipment for Connection to a Metallic Local Loop Interface of a Telecommunications Network Part 1: General;
AS/ACIF S043.2, Requirements for Customer Equipment for Connection to a Metallic Local Loop Interface of a Telecommunications Network Part 2: Broadband;
AS/ACIF S043.3, Requirements for Customer Equipment for Connection to a Metallic Local Loop Interface of a Telecommunications Network Part 3: DC, Low Frequency AC, and Voiceband

Toy Testing

AS/NZS ISO 8124.1 Clauses 4.1, 4.2, 4.3.1, 4.4, 4.5
(excluding 4.5.6), 4.6, 4.7, 4.8, 4.9, 4.11 (excluding 4.11.2),
4.13, 4.14, 4.15.3, 4.17, 4.18, 4.19, 4.23, 5.1, 5.2, 5.3, 5.4, 5.5,
5.6, 5.7, 5.8, 5.9, 5.11 (excluding 5.11.2), 5.14, 5.15, 5.18, 5.23,
& 5.24 (excluding 5.24.4);
AS/NZS ISO 8124.2

*Environmental-
Climatic*

IEC/EN 50155:2007:
- test 12.2.3 Cooling
- test 12.2.4 Dry Heat
- test 12.2.5 Damp Heat, Cyclic
- test 12.2.10 Salt Mist Test
- test 12.2.12 Watertightness
- test 12.2.13 Equipment Stress Screening
- test 12.2.14 Low Temperature Storage;

Test:

*Environmental -
Climatic (Cont.)*

Test Method(s)¹:

MIL-STD-810D:

- method 500.2 Low Pressure (Altitude)
- method 501.2 High Temperature
- method 502.2 Low Temperature
- method 503.2 Temperature Shock
- method 507.2 Humidity;

MIL-STD-810G:

- method 500.5 Low Pressure (Altitude)
- method 501.5 High Temperature
- method 502.5 Low Temperature
- method 503.5 Temperature Shock
- method 507.5 Humidity
- method 509.6 Salt Fog;

MIL-STD-202G:

- method 103B Humidity Steady State
- method 107G Thermal Shock;

IEC/EN 60068-2-1; AS 60068.2.1 Cold;

IEC/EN 60068-2-2; AS 60068.2.2 Dry Heat;

IEC/EN 60068-2-11; AS 60068.2.11 Salt Mist;

IEC/EN 60068-2-13; AS 60068.2.13 Low Air Pressure;

IEC/EN 60068-2-14; AS 60068.2.14 Change of Temperature;

IEC/EN 60068-2-30; AS 60068.2.30 Damp Heat (cyclic);

IEC/EN 60068-2-52; AS 60068.2.52 Salt Mist, Cyclic;

DEF STAN 00-35:2006:

- test CL1 Constant High Temperature - Low Humidity
- test CL4 Constant Low Temperature
- test CL5 Low Temperature Diurnal Cycle
- test CL7 Constant High Temperature - High Humidity
- test CL14 Thermal Shock and Rapid Change of Temperature
- test CL29 Immersion
- test CN2 Salt (corrosive) Atmosphere;

ISTA 3A - test blocks 1-2;

ISTA 2A - test blocks 1-2;

RTCA DO160G:

- Section 4 Temperature and Altitude
- Section 6 Humidity
- Section 14 Salt Spray;

ASTM B 117 Salt Spray

Environmental

*- Vibration and Shock **

1000 kg Sine (PK)

1000 kg Random (RMS)

2000 kg Shock (PK)

3 Hz to 3 kHz

Max. Velocity 180 cm/s

Max. Acceleration 100 g

IEC/EN 60068-2-6; AS/NZS 60068.2.6 Vibration (sinusoidal);

Test:

Test Method(s)¹:

Environmental

*- Vibration and Shock **

(Cont.)

1000 kg Sine (PK)
1000 kg Random (RMS)
2000 kg Shock (PK)
3 Hz to 3 kHz
Max. Velocity 180 cm/s
Max. Acceleration 100 g

IEC/EN 60068-2-27; AS/NZS 60068.2.27 Shock;
IEC/EN 60068-2-29; AS/NZS 60068.2.29 Bump;
IEC/EN 60068-2-64; AS/NZS 60068.2.64 Vibration (random);
IEC/EN 50155:2007 - test 12.2.11 Vibration, Shock, and Bump;
IEC/EN 61373:2010;
MIL-STD-810D:
- method 514.3 Vibration
- method 516.3 Shock;
MIL-STD-810F;
MIL-STD-810G:
- method 514.6 Vibration
- method 516.6 Shock;
MIL-STD-167-1A:
- type 1, Environmental;
MIL-STD-167-1 (ships):
- type 1, Environmental;
MIL-STD-202G:
- method 201A Vibration
- method 204D Vibration, High Frequency
- method 213B Shock
- method 214A Random Vibration;
ISTA 2A-test blocks 4 & 6;
ISTA 3A-test blocks 4 - 9;
ASTM D4169-09;
ASTM D4728-01;
IEC 60255-21-1 1st Edition;
IEC 60255-21-2 1st Edition;
DEF STAN 00-35:2006:
- test M1 Basic Vibration
- test M3 Basic Pulse Shock
- test M12 Bump;
RTCA DO160G
- Section 7 Shocks and Crash Safety
- Section 8 Vibration

Environmental

*- Solar Radiation**

MIL-STD-810G: Oct 2008, Method 505.5, Procedure I and Procedure II;
IEC 60068-2-5, Edition 2.0 2010-04;
ISO 4892-2:2006(E);
ISO 11341:2004;
ISO 105-B02-2014(E);
ISO 105-B04-1994;
ASTM D4459-12;
ASTM D1248-12;
ASTM D2565-99 (2008);
ASTM D4434 D4434M-11;
ASTM D4798 D4798M-11;
ASTM D4799 / D4799M -08(2013)e1;
ASTM D6695-08;
ASTM C1257-06a(2012);
ASTM C1442-14;

Test:

Test Method(s)¹:

*Environmental
- Solar Radiation* (Cont.)*

ASTM C1501-14;
ASTM C1519-10;
ASTM C732-06(2012);
ASTM C734-06(2012);
ASTM C793-05(2010);
ASTM D1148-13;
ASTM D3424-11;
ASTM D3451-06(2012);
ASTM D4329-13;
ASTM D4587-11;
ASTM D4674-02a(2010);
ASTM D5208-14;
ASTM D5894-10;
ASTM D6577-06e(2011);
ASTM D750-12;
ASTM D904-99(2013);
ASTM D925-14;
ASTM F1945-05(2011);
ASTM G151-10;
ASTM G154-12a;
ASTM G155-13;
DEF STAN 00-35
- CL-2
- CL-3
- CL-6;
ASTM D4459-12;
ASTM D1248-12;
ASTM D2565-99 (2008);
ASTM D4434 D4434M-11;
ASTM D4798 D4798M-11;
ASTM D4799 / D4799M -08(2013)e1;
ASTM D6695-08;
ASTM C1257-06a(2012);
ASTM C1442-14;
ASTM C1501-14;
ASTM C1519-10;
ASTM C732-06(2012);
ASTM C734-06(2012);
ASTM C793-05(2010);
ASTM D1148-13;
ASTM D3424-11;
ASTM D3451-06(2012);
ASTM D4329-13;
ASTM D4587-11;
ASTM D4674-02a(2010);
ASTM D5208-14;
ASTM D5894-10;
ASTM D6577-06e(2011);
ASTM D750-12;
ASTM D904-99(2013);
ASTM D925-14;
ASTM F1945-05(2011);
ASTM G151-10;

Test:

Test Method(s)¹:

Environmental

- *Solar Radiation** (Cont.)

ASTM G154-12a;
ASTM G155-13;
DEF STAN 00-35
- CL-2
- CL-3
- CL-6;
AS/NZS3675 Appendix H

**Also using customer supplied test methods directly related to the tests and parameters listed.*

¹When the date, revision or edition of a test method standard is not identified on the scope of accreditation, the laboratory is required to be using the current version within one year of the date of publication, per part C., Section 1 of A2LA R101 - *General Requirements- Accreditation of ISO-IEC 17025 Laboratories.*



Accredited Laboratory

A2LA has accredited

AUSTEST LABORATORIES MELBOURNE

Thomastown, Victoria, Australia

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).



Presented this 23rd day of November 2015.

A handwritten signature in blue ink, appearing to read "J. C. Burt".

Senior Director of Quality and Communications
For the Accreditation Council
Certificate Number 2765.01
Valid to November 30, 2017
Revised June 15, 2016

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.