Laboratory Accreditation Programmes

Schedule to

CERTIFICATE OF ACCREDITATION

BRANZ Ltd **Client Number 38**

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Authorised Representative
Mr Keith Clark
Quality and Environment Manager

Programme
Applied Physics Testing Laboratory

Accreditation Number 37 **Initial Accreditation Date** 4 October 1976

Conformance Standard
ISO/IEC 17025:2017
General requirements for the competence of testing and calibration laboratories

Laboratory Services Summary

6.31	Thermal Properties of Materials
6.32	Reaction to Fire
6.33	Fire Resistance Tests

Key Technical Personnel

Ash Babb	6.33
Paul Chapman	6.33
Dr Ian Cox-Smith	6.31
Lisa Grant	6.32
Lester Greive	6.32
Lukas Hersche	6.32
Sheng-Huei Huang	6.31
Ed Soja	6.32, 6.33
Roger Stanford	6.31
Stephen Whatham	6.33
Peter Whiting	6.32, 6.33

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6.31 Thermal Properties of Materials

(a) Conductivity

Thermal transmission properties of thermal insulations and other materials in accordance with the parts of AS/NZS 4859.1 listed below by means of a heat flow meter apparatus operated in accordance with ASTM C518 and ISO 8301.

To the least uncertainties in thermal resistance (R) detailed below:

R (m^2K/W)	Least uncertainty of measurement
0.05 to 15	2 %

Measurement of samples with thickness in the range 2 mm to 300 mm.

Testing in accordance with the following standards

AS/NZS 4859.1		Thermal insulation materials for buildings Part 1: General criteria and technical provisions
	Section 2.3.3	Determination of thermal resistance R-value Specimen conditioned Statistically adjusted thermal properties
	Section 4	Cellulose fibre insulation
	Section 5	Insulation containing wool
	Section 6	Low density polyester fibre insulation
	Section 7	Low density mineral wool insulation
	Section 8	Rigid cellular foam insulation
	Appendix B	Determination of the thickness and density of compressible fibrous insulation using ASTM C167 with variations
	Appendix C	Determination of the thermal resistance of loose fill insulation using ASTM C687 with variations
AS/NZS 4859.2		Thermal insulation materials for buildings Part 2: Design
	Clause 5.2	Adjusting thermal properties to a declared temperature
ASTM C167		Standard Test Method for Thickness and Density of Blanket of Batt Thermal Insulations
ASTM C1667		Standard Test Method for Using Heat Flow Meter Apparatus to Measure the Center-of-Panel Thermal Transmission Properties of Vacuum Insulation Panels
ASTM C653		Standard Guide for Determination of the Thermal Resistance of Low-Density Blanket-Type Mineral Fiber Insulation
ASTM C687		Standard Practice for Determination of Thermal Resistance of Loose-Fill Building Insulation (*including cellulose*)
ISO 8301		Thermal insulation — Determination of steady-state thermal resistance and related properties — Heat flow meter apparatus

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Incorporated by reference to AS/NZS 4859.1

EN 13164	Thermal insulation products for buildings. Factory made extruded polystyrene foam (XPS) products. Specification, Annex C
EN 13165	Thermal insulation products for buildings. Factory made rigid polyurethane foam (PU) products. Specification, Annex C (*including PIR and PUR*)
EN 13166	Thermal insulation products for buildings. Factory made phenolic foam (PF) products. Specification, Annex C

6.32 Reaction to Fire

Tests in this class of test may be, where required by the client, accompanied by associated statements of compliance with relevant parts of building codes.

(d) Cone Calorimeter

AS/NZS 3837	Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter
ASTM E 1354	Standard test method for heat and visible smoke release rates for materials and products using an oxygen consumption calorimeter
ISO 5660.1	Reaction to fire tests – Heat release, smoke production and mass loss rate – Part 1: Heat release rate (cone calorimeter method)
ISO 5660.2	Reaction to fire tests – Heat release, smoke production and mass loss rate – Part 2: Smoke production rate (dynamic measurement)

(e) Other fire tests

ISO 9705	Fire tests – Full scale room test for surface products (and AS ISO 9705)

6.33 Fire Resistance Tests

In accordance with the following standard methods or equivalent national variations, such as BS EN, etc.

AS 1530 Part 4	Methods for fire tests on building materials, components and structures Part 4 Fire resistance tests of elements of construction
AS 1530 Part 8.1	Methods for fire tests on building materials, components and structures Tests on elements of construction for buildings exposed to simulated bushfire attack – Radiant heat and small flaming sources
AS 1530 Part 8.2	Methods for fire tests on building materials, components and structures Tests on elements of construction for buildings exposed to simulated bushfire attack – Large flaming sources
AS/NZS 3013	Electrical installations—Classification of the fire and mechanical performance of wiring system elements. Appendix C Fire Test Method—Supports and Fixings

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ASTM E119	Standard methods of Fire Tests of Building Construction and materials
ASTM E814	Fire Tests of Through-Penetration Fire stops
BS 476 Parts 20-24	Fire tests on Building Materials and Structures
EN 1363-1	Fire resistance tests – Part 1: General requirements
EN 1363-2	Fire resistance tests – Part 2: Alternative and additional procedures (Clauses 5, External fire exposure curve, 6 Slow heating curve, 8 Measurement of radiation)
EN 1364-1	Non-loadbearing elements – Part 1 Walls
EN 1364-2	Non-loadbearing elements – Part 2 Ceilings
EN 1365-1	Loadbearing elements – Part 1 Walls
EN 1365-2	Loadbearing elements – Part 2 Floors and roofs
EN 1366-3	Service installations – Part 3 Penetration seals
EN 1366-4	Service installations – Linear joint seals
EN 1634-1	Door and shutter assemblies, openable windows and elements of building hardware – Part 1: Fire resistance tests for door and shutter assemblies and openable windows.
EN 13381-4	Test methods for determining the contribution of the fire resistance of structural members – Part 4: Applied passive protection to steel members
EN 13381-8	Test methods for determining the contribution of the fire resistance of structural members – Part 8: Applied reactive protection to steel members
NFPA 251	Standard methods of Tests of Fire Resistance of Building Construction and Materials
NFPA 252	Standard methods of Fire Tests of Door Assemblies
ISO 834-1	Elements of building construction – Part 1: General requirements
ISO 3008	Door and shutter assemblies
ISO 3009	Elements of building construction – Glazed elements
ISO 6944-1	Fire containment – Elements of building construction – Part 1 Ventilation ducts
ISO 10294-1	Fire dampers for air distribution systems – Part 1 Test method
ISO 10294-5	Fire dampers for air distribution systems – Part 5 Intumescent fire dampers
SS 333 clause 5.3	Fire dampers
SS 332 Annex E	Fire doors
SS 489 Annex A	Fire shutters
UL 9	Standard for Fire Tests of Window Assemblies
UL 10B	Standard for Fire Tests of Door Assemblies
UL 10C	Standard for Positive Pressure Fire Tests of Door Assemblies
UL 263	Standard for Fire Tests of Building Construction and Materials
UL 555	Standard for Fire Dampers
UL 1479	Standard for Fire Tests of Through-Penetration Firestops
UL 2079	Standard for Tests for Fire Resistance of Building Joint systems

International Code for Application of Fire Test Procedures (2010 FTP Code)

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Resolution MSC.307(88) – Annex 1 – Fire Test Procedures – Part 3 – Test for “A”, “B” and “F” Class Divisions

Note: Floor and roof testing dimensions limited to 4 m x 3 m, which is a deviation from UL, NFPA and ASTM standards

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