

Notice of Issuing, Amending and Revoking Acceptable Solutions and Verification Methods for Building Code Clauses B1, C1-C6, E1, F7, G12 and G13 and Associated Materials Incorporated by Reference

New Acceptable Solutions and Verification Methods Proposed to be Issued

Pursuant to section 22(1) of the Building Act 2004 (“Act”), I give notice that the following acceptable solution is to be issued:

- G12 Water Supplies Acceptable Solution G12/AS3.

The above acceptable solution will come into force on 2 November 2023.

Acceptable Solutions and Verification Methods to be Amended

Pursuant to section 24(1) of the Act, I give notice of amendments to the following acceptable solutions and verification methods:

- B1 Structure Verification Method B1/VM1,
- C1-C6 Protection from fire Acceptable Solution C/AS1,
- C1-C6 Protection from fire Acceptable Solution C/AS2,
- C1-C6 Protection from fire Verification Method C/VM1,
- C1-C6 Protection from fire Verification Method C/VM2,
- E1 Surface Water Acceptable Solution E1/AS1,
- E1 Surface Water Acceptable Solution E1/AS2,
- E1 Surface Water Verification Method E1/VM1,
- F7 Warning Systems Acceptable Solution F7/AS1,
- G12 Water Supplies Acceptable Solution G12/AS1,
- G12 Water Supplies Acceptable Solution G12/AS2,
- G12 Water Supplies Verification Method G12/VM1,
- G13 Foul Water Acceptable Solution G13/AS1,
- G13 Foul Water Acceptable Solution G13/AS2,
- G13 Foul Water Acceptable Solution G13/AS3,
- G13 Foul Water Verification Method G13/VM1,
- G13 Foul Water Verification Method G13/VM2, and
- G13 Foul Water Verification Method G13/VM4.

The amended version of the above acceptable solutions and verification methods come into force on 2 November 2023. The preceding versions continue to be in force until 1 November 2024 except for B1 Structure Verification Method B1/VM1 First Edition, Amendment 20 which will no longer be in force after 2 November 2023.

The acceptable solutions and verification methods can be downloaded free of charge from the Ministry of Business, Innovation and Employment (MBIE) website: www.building.govt.nz/building-code-compliance.

Acceptable Solutions and Verification Methods to be Revoked

Pursuant to section 24(1) of the Act, I give notice that B1 Structure Verification Method B1/VM1 First Edition Amendment 20 will be revoked on 2 November 2023.

Pursuant to section 24(1) of the Act, I give notice that the following versions of these acceptable solutions and verification methods will be revoked on 1 November 2024:

- C1-C6 Protection from fire Acceptable Solution C/AS1 First Edition Amendment 5,
- C1-C6 Protection from fire Acceptable Solution C/AS2 First Edition Amendment 2,
- C1-C6 Protection from fire Verification Method C/VM1, First Edition Amendment 5,
- C1-C6 Protection from fire Verification Method C/VM2, First Edition Amendment 6,
- E1 Surface Water Acceptable Solution E1/AS1 First Edition Amendment 11,
- E1 Surface Water Acceptable Solution E1/AS2 First Edition Amendment 11,
- E1 Surface Water Verification Method E1/VM1 First Edition Amendment 11,
- F7 Warning Systems Acceptable Solution F7/AS1 Fourth Edition,

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- G12 Water Supplies Acceptable Solution G12/AS1 Third Edition, Amendment 12,
- G12 Water Supplies Acceptable Solution G12/AS2 Third Edition, Amendment 12,
- G12 Water Supplies Verification Method G12/VM1 Third Edition, Amendment 12,
- G13 Foul Water Acceptable Solution G13/AS1 Second Edition, Amendment 9,
- G13 Foul Water Acceptable Solution G13/AS2 Second Edition, Amendment 9,
- G13 Foul Water Acceptable Solution G13/AS3 Second Edition, Amendment 9,
- G13 Foul Water Verification Method G13/VM1 Second Edition, Amendment 9,
- G13 Foul Water Verification Method G13/VM2 Second Edition, Amendment 9, and
- G13 Foul Water Verification Method G13/VM4 Second Edition, Amendment 9.

Amendments to Material Incorporated by Reference

Pursuant to sections 405, 406(c)(ii), and 410(1)(e) of the Act, I give notice of new material and amended material to be incorporated by reference on 2 November 2023 into the table of acceptable solutions and verification methods below. The material incorporated by reference in Column 1 of the table below, is replaced by the material listed in Column 2. Where there is text in Column 2 only, this signifies new material. Where there is text in Column 1 only, this signifies removal of material.

Column 1	Column 2
Acceptable Solution C/AS1 References	
NZS 4512: 2010 Fire detection and alarm systems in buildings	NZS 4512: 2021 Fire detection and alarm systems in buildings
NZS 4514: 2009 Interconnected Smoke Alarms for houses	NZS 4514: 2021 Interconnected smoke alarms for houses
NZS 4541: 2013 Automatic fire sprinkler systems	NZS 4541: 2020 Automatic fire sprinkler systems
	BS EN 13501-1: 2018 Fire classification of construction products and building elements - Classification using test data from reaction to fire tests
AS/NZS 1668.1: 1998 The use of ventilation and air conditioning in buildings - Fire and smoke control in multi-compartment buildings Amendment 1	AS 1668.1: 2015 The use of ventilation and air conditioning in buildings - Fire and smoke control in buildings Amendment 1
	AS/NZS 3000: 2018 Electrical installations - Known as the Australian/New Zealand Wiring Rules
AS/NZS 5601.1: 2010 Gas Installation: General installations Amendment 1	
AS/NZS 60598.2.2: 2011 Luminaires: Particular requirements - Recessed luminaires Amend: AA	
AS 1366.1: 1992 Rigid cellular plastics sheets for thermal insulation: Rigid cellular polyurethane (RC/PUR) Amend 1	
AS 1366.2: 1992 Rigid cellular plastics sheets for thermal insulation: Rigid cellular polyisocyanurate (RC/PIR) Amend 1	
AS 1530.2: 1993: Test for flammability of materials	
ISO 5660.2: 2002 Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Smoke production rate (dynamic measurement)	
ISO 9239.1: 2010 Reaction to fire tests for flooring - Determination of the burning behaviour using a radiant heat source.	
ISO 9705: 1993 Fire tests - Full scale room test for surface products	
	Conservation Act 1987
	National Park Act 1970
	Reserves Act 1977

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	Health and Safety at Work (Hazardous Substances) Regulations 2017
	Local Government Act 1974
Acceptable Solution C/AS2 References	
AS/NZS 1668.1: 1998 The use of ventilation and air conditioning in buildings – Fire and smoke control in multi-compartment buildings Amendment 1	AS 1668.1: 2015 The use of ventilation and air conditioning in buildings – Fire and smoke control in buildings Amendment 1
	AS/NZS 3000: 2018 Electrical installations – Known as the Australian/New Zealand Wiring Rules
NZS 4512: 2010 Fire detection and alarm systems in buildings	NZS 4512: 2021 Fire detection and alarm systems in buildings
NZS 4514: 2009 Interconnected Smoke Alarms for houses	NZS 4514: 2021 Interconnected smoke alarms for houses
NZS 4541: 2013 Automatic fire sprinkler systems	NZS 4541: 2020 Automatic fire sprinkler systems
Verification Method C/VM2 References	
NZS 4512: 2010 Fire detection and alarm systems in buildings	NZS 4512: 2021 Fire detection and alarm systems in buildings
NZS 4541: 2013 Automatic fire sprinkler systems	NZS 4541: 2020 Automatic fire sprinkler systems
E1 Surface Water References	
	NZS 3501: 1976 Specification for copper tubes for water, gas, and sanitation Amendments: 1, 2, 3
AS/NZS 1254: 2010 PVC pipes and fittings for stormwater and surface water applications Amendments 1, 2	AS/NZS 1254: 2010 PVC-U pipes and fittings for stormwater and surface water applications Amendments 1, 2, 3
AS/NZS 2280: 2014 Ductile iron pipes and fittings Amendment 1, 2	AS/NZS 2280: 2020 Ductile iron pipes and fittings Amendment 1
AS/NZS 2566.1: 1998 Buried Flexible pipelines – Structural Design	AS/NZS 2566.1: 1998 Buried Flexible pipelines – Structural Design Amendment 1
AS/NZS 3500: - Plumbing and drainage Part 3: 2018 Stormwater drainage	AS/NZS 3500: - Plumbing and drainage Part 3: 2021 Stormwater drainage
AS/NZS 4130: 2018 Polyethylene (PE) pipes for pressure applications	AS/NZS 4130: 2018 Polyethylene (PE) pipes for pressure applications Amendment: 1
AS 1397: 2011 Continuous hot-dip metallic coated steel sheet and strip – Coatings of zinc and zinc alloyed with aluminium and magnesium Amendment 1	AS 1397: 2021 Continuous hot-dip metallic coated steel sheet and strip – Coatings of zinc and zinc alloyed with aluminium and magnesium
	AS 1432: 2004 Copper tubes for plumbing, gasfitting and drainage applications
	AS 1566: 1997 Copper and copper alloys – Rolled flat products
	AS 1528.1: 2019 Stainless steel tubes and tube fittings for food processing and hygienic applications – Tubes
	AS 1566: 1997 Copper and copper alloys – Rolled flat products
	AS 1866: 1997 Aluminium and aluminium alloys – Extruded rod, bar, solid and hollow shapes
BS EN 1172: 1997 Copper and copper alloys – sheet and strip for building	BS EN 1172: 2011 Copper and copper alloys – sheet and strip for building purposes

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NZS/BS 970.1: 1991 Specification for wrought steels for mechanical and allied engineering purposes - General inspection and testing procedures and specific requirements for carbon, carbon manganese, alloy and stainless steels Amendment 1	
	ASTM A240/A240M: 2020 Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
F7 Warning Systems References	
NZS 4512: 2010 Fire alarm systems in buildings	
NZS 4514: 2009 Interconnected smoke alarms for houses	
NZS 4515: 2009 Fire sprinkler systems for life safety in sleeping occupancies (up to 2,000 m2)	
NZS 4541: 2007 Automatic fire sprinkler systems Amend: 1	
AS 3786: 1993 Smoke alarms Amends: 1, 2, 3, 4	
ISO 12239: 2003 Fire detection and fire alarm systems - smoke alarms	
BS EN 14604: 2005 Smoke alarm devices	
G12 Water Supplies References	
NZS/BS 1387: 1985 Specification for screwed and socketed steel tubes and tubulars and for plain end steel tubes suitable for welding or screwing to BS 21 pipe threads Amendment 1	
	NZS 4305: 1996 Energy efficiency - domestic type hot water systems
NZS 5807.2: 1980 Code of practice for industrial identification by colour, wording or other coding - Identification of contents of piping, conduit and ducts Amendments 1, 2	
NZS 7601: 1978 Specification for polyethylene pipe (Type 3) for cold water services	
NZS 7602: 1977 Specification for polyethylene pipe (Type 5) for cold water services Amendment 1	
NZS 7610: 1991 Specification for blue polyethylene pipes up to nominal size 63 for below ground use for potable water Amendments: 1, 2, 3	
AS/NZS 1477: 2006 PVC pipes and fittings for pressure applications Amendment 1	AS/NZS 1477: 2017 PVC pipes and fittings for pressure applications
	AS/NZS 2033: 2008 Installation of polyethylene pipe systems Amendments: 1, 2
	AS/NZS 2492: 2007 Cross-linked polyethylene (PE-X) pipes for pressure applications

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	<p>AS/NZS 2537: Mechanical jointing fittings for use with crosslinked polyethylene (PE-X) for pressure applications.</p> <p>Part 1: 2011 Plastics piping systems for hot and cold water installations - Crosslinked polyethylene (PE-X) - General</p> <p>Part 2: 2011 Plastics piping systems for hot and cold water installations - Crosslinked polyethylene (PE-X) - Fittings Amend 1</p> <p>Part 3: 2011 Plastics piping systems for hot and cold water installations - Crosslinked polyethylene (PE-X) - Fitness for purpose of the system</p> <p>Part 4: 2011 Plastics piping systems for hot and cold water installations - Crosslinked polyethylene (PE-X) - Guidance for the assessment of conformity.</p>
<p>AS/NZS 2642: Polybutylene pipe systems</p> <p>Part 1: 2007 Polybutylene (PB) pipe extrusion compounds</p>	<p>AS/NZS 2642: Polybutylene pipe systems</p> <p>Part 1: 2007 Polybutylene (PB) pipe extrusion compounds Amend: 1</p>
<p>AS 2845: Water supply - Backflow prevention devices</p> <p>Part 1: 2010 Materials, design and performance requirements Amend: 1</p>	<p>AS/NZS 2845: Water supply - Backflow prevention devices Part 1: 2022 Materials, design and performance requirements</p>
<p>AS 2845: Water supply - Backflow prevention devices</p> <p>Part 3: 1993 Field testing and maintenance Amend: 1</p>	<p>AS/NZS 2845: Water supply - Backflow prevention devices Part 3: 2020 Field testing and maintenance of testable devices</p>
<p>AS/NZS 3500: Plumbing and drainage</p> <p>Part 1: 2018 Water services</p> <p>Part 4: 2018 Heated water services Amend: 1</p>	<p>AS/NZS 3500: Plumbing and drainage</p> <p>Part 1: 2021 Water services, Amendment 1</p> <p>Part 4: 2021 Heated water services</p>
	<p>AS/NZS 3879: 2011 Solvent cements and priming fluids for PVC (PVC-U and PVC-M) and ABS and ASA pipes and fittings</p>
<p>AS/NZS 4020: 2005 Testing of products for use in contact with drinking water</p>	<p>AS/NZS 4020: 2018 Testing of products for use in contact with drinking water</p>
<p>AS/NZS 4129: 2008 Fittings for polyethylene (PE) pipes for pressure applications Amendment 1</p>	<p>AS/NZS 4129: 2020 Fittings for polyethylene (PE) pipes for pressure applications</p>
<p>AS/NZS 4130: 2009 Polyethylene (PE) pipes for pressure applications Amend: 1</p>	<p>AS/NZS 4130: 2018 Polyethylene (PE) pipes for pressure applications Amend: 1</p>
	<p>AS 1432: 2004 Copper tubes for plumbing, gasfitting and drainage applications</p>
	<p>AS 2345: 2006 (R2016) Dezincification resistance of copper alloys</p>
	<p>AS 3498: 2020 Safety and public health requirements for plumbing products - Water heaters and hot-water storage tanks</p>
	<p>AS 3688: 2016 Water supply and gas systems - Metallic fittings and end connectors</p>

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	<p>AS 4032 Water supply</p> <p>Part 1: 2005 Valves for the control of heated water supply temperatures Thermostatic mixing valves - Materials design and performance requirements</p> <p>Part 2: 2005 (R2015) Tempering valves and end of line temperature-actuated devices Amend: 1, 2</p> <p>Part 3: 2004 Requirements for field-testing, maintenance or replacement of thermostatic mixing valves, tempering valves and end-of-line temperature control devices</p> <p>Part 4: 2014 Thermostatically controlled taps for the control of heated water supply temperatures</p>
	AS 4809: 2017 Copper pipe and fittings - Installation and commissioning
	AS 5200.053: 2008 Plumbing and drainage products - Stainless steel pipes and tubes for pressure applications
	BS EN 1111: 2017 Sanitary tapware. Thermostatic mixing valves (PN-10). General technical specification
	BS EN 1287: 2017 Sanitary tapware. Low pressure thermostatic mixing valves. General technical specification
BS 6920 Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water Part 1: 2000 Specification Part 2: 2000 Methods of tests	BS 6920 Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water Part 1: 2014 Specification Part 2: 2014 Methods of tests
	BS EN 13831: 2007 Closed expansion vessels with built-in diaphragm for installation in water
AS 1357 Water valves for use with unvented water heaters Part 1: 2009 Protection valves Amend 1, 2	AS 1357 Valves primarily for use in heated water systems Part 1: 2019 Protection valves
Gas Regulations 1993	Gas (Safety and Measurement) Regulations 2010
	Water Services Act 2021
NZ Backflow testing standard 2011 Field testing of backflow prevention devices and verification of air gaps	NZ Backflow testing standard 2019 Field testing of backflow prevention devices and verification of air gaps
	Chartered Institute of Plumbing and Heating Engineering, Plumbing Engineering Services Design Guide, Hornchurch 2002
	NSF/ANSI/CAN 372: 2020 Drinking Water System Components - Lead Content
G13 Foul Water References	
AS/NZS 2280: 2014 Ductile iron pipes and fittings Amendments 1, 2	AS/NZS 2280: 2020 Ductile iron pipes and fittings Amendment 1
	AS/NZS 3500: - Plumbing and drainage Part 2: 2021 Sanitary plumbing and drainage Amendment 1
AS/NZS 4130: 2018 Polyethylene (PE) pipe for pressure applications	AS/NZS 4130: 2018 Polyethylene (PE) pipe for pressure applications Amendment 1

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	AS/NZS 7671: 2010 Plastics piping systems for soil and waste discharge (low and high temperature) inside buildings – Polypropylene (PP)
	AS 1432: 2004 Copper tubes for plumbing, gasfitting and drainage applications
	AS 1741: 1991 Vitrified clay pipes and fittings with flexible joints – Sewer quality
AS 3571: 2009 Plastic piping systems – Glass reinforced thermoplastics (GRP) systems based on unsaturated polyester (UP) resin – pressure and non-pressure drainage and sewerage (ISO 10467: 2004 MOD)	AS 3571: 2009 Plastic piping systems – Glass reinforced thermoplastics (GRP) systems based on unsaturated polyester (UP) resin – pressure and non-pressure drainage and sewerage (ISO 10467: 2004 MOD) Amendment 1
	AS 4809: 2017 Copper pipe and fittings – Installation and commissioning
	BS EN 295.1: 2013 Vitrified clay pipe systems for drains and sewers – Requirements for pipes, fittings and joints
	BS EN 1124: Pipes and fittings of longitudinally welded stainless steel pipes with spigot and socket for waste water systems Part 1: 1999 Requirements, testing, quality control Part 2: 2014 System S, forms and dimensions

Purchase of Certain Material Incorporated by Reference

Certain material incorporated by reference described above can be accessed online for free from Standards New Zealand at www.standards.govt.nz. Others may be purchased directly from Standards New Zealand, MBIE, 15 Stout Street, Wellington 6011, or online at: www.standards.govt.nz.

Hard copies of standards are not kept in stock for sale but may be ordered by following the directions online or by visiting MBIE’s Wellington office.

Availability of remaining Material Incorporated by Reference

The Water Services Act 2021 and the Gas (Safety and Measurement) Regulations 2010 can be accessed for free from <http://www.legislation.govt.nz>.

Australian Standards can be purchased from <http://www.standards.org.au>.

The NZ Backflow testing standard 2019 can be accessed for free from <http://www.waternz.org.nz>.

Publications from the Chartered Institute of Plumbing and Heating Engineering can be purchased from <http://www.ciphe.org.uk/>.

Publications from the National Sanitation Foundation can be purchased from <http://www.techstreet.com>.

Publications from ASTM International can be purchased from <http://www.astm.org/>.

Viewing Material Incorporated by Reference

Material incorporated by reference is available for inspection free of charge at 15 Stout Street, Wellington, between the hours of 8.30am and 5.00pm, Monday to Friday.

To make an appointment to view material incorporated by reference, call 0800 242 243.

Dated at Wellington this 2nd day of November 2023.

DAVID HALL, General Manager, Ministry of Business, Innovation and Employment.